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NEWS SUMMARY

GENERAL

Heath warns South Africa

Former Prime Minister Edward Heath gave South Africa a *stern warning* **that** *the West* **would not help in the event of a** *Russian threat unless* **all South Africans had the vote.**

Mr Heath was speaking in Johannesburg at the opening of a conference on Southern Africa in the world.

"Unless and until the dismantlement of apartheid is assured, it would be a grave mistake for South Africa to base her strategy on the assumption that when the chips are down the West will stand with her," he said. *Angola fighting,* **Back Page**

Carnival climax

London's Notting Hill carnival reached its climax yesterday afternoon. Crowds were thinner, *despite sunny weather,* and police reported only 10 arrests. **Back Page; Men and Matters, Page 16**

Israel protests

Israel's ambassador to France will protest to President Mitterand today over the French Foreign Minister's weekend meeting with PLO leader Yasser Arafat. **Page 2**

Budget cut plan

The West German Government may cut the growth of its 1982 budget by even more than planned a month ago. **Back Page**

20 injured

Twenty were injured when a bomb exploded in the car park at the U.S. and NATO European air force operations headquarters at Ramstein, West Germany.

Brighton brawls

Hundreds of police split up groups of brawling mods, skinheads and punks in Brighton last night. Earlier, five youths were fined a total of £1,200 after Sunday's disturbances.

Aberfan threat

Parents at Aberfan, South Wales, threatened to keep their children from school because of fears about an underground fire *at a nearby coal tip.*

Women drowned

A woman drowned after trying to save two children swept out to sea on an airbed off Seaton, Devon. The children survived.

'Ban N. Zealand'

The Supreme Council for Sport in Africa will campaign for New Zealanders to be barred from the Athletics World Cup in Rome next week because of sporting links with South Africa.

Test latest

Australia were 344-9 at the close of play in the Sixth Test against England at the Oval. *Dirk* Wellham made 103. Cricket, Page 15

Fecund chance

A Cypriot woman with two sets of reproductive organs gave birth to her second child in Nicosia. She now has one from each womb.

Briefly . . .

Airline pilot David Watt won the British Gliding Championship at Dunstable.

Home-made *parcel* bomb addressed to President Reagan was found in a Detroit postbox.

Concorde is to fly further from Canada's east coast to reduce noise *pollution.*

Bomb damaged a Lebanese airliner after it landed in Beirut *from* Libya.

BUSINESS

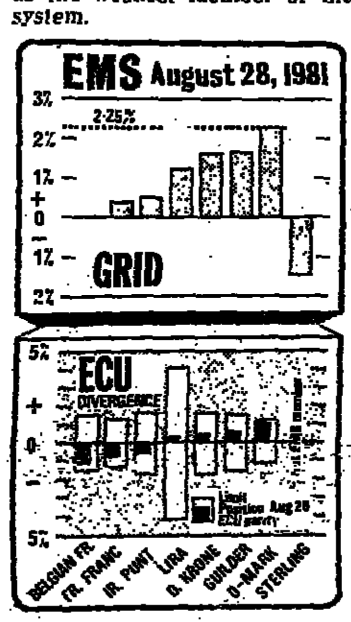
Coffee nations seek rise in prices

● **COFFEE** producing countries today start talks in London intended to raise world prices, stabilise the market and form a united front before talks with consumers. **Back Page**

● **CURRENCY** trading was generally quiet last week, with the dollar finishing slightly *firmer on balance* against most currencies. The *market was* thin, partly reflecting the long *holiday weekend in Britain.*

All members of the European Currency System traded well within divergence limits, giving little substance to recent rumours of a realignment of rates involving a devaluation of the French franc against the D-Mark.

The German unit remained the strongest EMS currency, but the franc was not under any pressure and finished slightly firmer on the week. It was replaced by the Belgian franc as the weakest member of the *system.*



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the lira) may move more than 2¼ per cent. The lower chart gives each currency's divergence from its "central rate" against the European Currency Unit (ECU), itself a basket of European currencies.

● **BASE RATES** and mortgage rates *may rise before the end* of 1981, say brokers James Capel. **Page 6**

● **SOVIET UNION** *signed a* five-year agreement covering a big programme of power engineering in Vietnam. **Page 3**

● **LLOYD'S** of London said a new ruling council for the insurance market would have to decide whether its members should be paid. **Page 4**

● **BRITISH TELECOM** will open 40 telephone shops in an attempt to fend off competition from independent retailers. **Page 4**

● **FORD** launches revised versions of the Fiesta today, including a 1600cc sports model. **Page 7**

● **TUC** called for increased UK power station construction and a £1bn scheme to boost energy conservation. **Page 9**

● **VOLVO,** the Swedish automobile group, reported earnings in the first half of 1981 of SKr 619m (£63.6m) before currency fluctuation losses, against SKr 596m. **Page 28**

● **SASOL,** the South African oil-from-coal producer, raised pre-tax profit 35 per cent to R281.8m (£161m) in the year to June 27. **Page 28**

● **GEORGE ARMITAGE &** Sons, brick manufacturer, reported pre-tax profits of £28,000 (£502,000) for the first half of 1981. **Page 18**

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Tehran mourners call for further purge as leaders are buried

BY TERRY POVEY IN TEHRAN

IRAN's President and Prime Minister, assasinated in a bomb explosion on Sunday, were buried yesterday at a funeral attended by hundreds *of thousands* of Iranians. The funeral *in Tehran brought calls for* immediate reprisals against the *dissidents blamed* for the assassination.

President Mohammed Ali Rajai and Prime Minister Javad *Bahonar,* were killed *in* the *bomb* explosion and subsequent fire at the Prime Minister's office building in central Tehran. One report yesterday said eight people had died and 23 had been injured in the bomb attack.

Among those reported as injured was Colonel Vahid Dastgerdi the head of the national police force and General *Sharafskha, the Acting* Commander of the ground *forces, as well as* senior representatives of the paramilitary gendarmeria and the joint Chiefs of Staff.

Representatives of the state security organisations would also have been present at the meeting as would officials from the revolutionary guards.

The call for reprisals came from Ayatollah Rabbani Amlashi, *the Prosecutor General,* who told mourners that "the nation *demands from all the* revolutionary prosecutors in the *country that their court should* be truly Islamic."

They should act as *did Imam* Ali, one of the first leaders of Shi'ite Islam, who "chopped off the heads of 4,000 in one day," he said.

"*Khalkhali's courts must* be set up again," the crowd shouted back. The courts of Ayatollah Khalkhali are well known for their rapid ways of dealing out justice, *more often than not*

Mourners call for revenge during yesterday's double funeral in Tehran.

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Union support sought for Silkin

BY JOHN LLOYD, LABOUR CORRESPONDENT

STRENUOUS EFFORTS are being made to swing sufficient union support behind Mr John Silkin in his campaign for deputy leadership of the Labour Party to ensure that he survives *into the second ballot.*

If he is not knocked out in the first *round ballot,* the union leaders involved believe, he would then have the best chance of all the candidates of securing outright victory. They assume that Mr Tony Benn would drop out on the first ballot, and that Mr Silkin would then pick up the vast majority of the constituency parties and a large number of centre-left MPs, and could then beat Mr Denis Healey.

The key to Mr Silkin's hopes of success in the first ballot lies with *the two general unions,* the Transport and General Workers (TGWU) and the General and Muicipal Workers, which between them command about 2m affiliated members, around one-third of total union affiliations to the Labour Party.

The Transport and General Workers' Union, which sponsors Mr Silkin as an MP, is expected to cast its votes for him. It is believed to have been active in persuading other unions in the centre and left to follow suit in order to block the candidacy of Mr Benn, whose success, it is felt, would divide the party.

The GMWU will decide its choice at its *executive committee* meeting next month, following consultation among its membership. It had been thought certain to vote for Mr Healey—but that is now in doubt.

Other unions on the left could also come under TGWU pressure *to vote for Mr Silkin.*

The National Union of Public Employees (NUPE), which commands some 600,000 votes and is the party's fourth largest affiliate, is a possible supporter. NUPE *had been thought likely* to vote for Mr Benn.

Mr Silkin has already secured the support of two small unions, the National Union of Agricultural and Allied Workers and the National Union of Seamen.

Mr Silkin has appeared confident of victory. He has pointed to the unions as the source of his strongest support.

He *has worked hard, in his* public pronouncements, at presenting *himself as a middle-way* between Mr Healey's refusal to endorse elements in recent party policy and the intolerance and sectarianism of Mr Benn's supporters.

Healey campaigners move to eliminate Silkin, Page 4; Lombard, Page 14

Soviet Union steps up gold sales

BY DAVID MARSH

THE Soviet Union has stepped up sales of gold to western bullion markets to around the highest levels for two years.

The Russians *held back* supplies from the market for much of 1980 and the *first part of* 1981, but are now under increased *pressure to sell*—despite a bullion price which is *still looking fragile in the* $420 to $430 per ounce range.

Some European bullion dealers in touch with Moscow believe the Kremlin seriously miscalculated by not selling more metal last year when the price averaged more than $600.

The need to sell gold reflects the deteriorating balance of payments of the world's *number* two gold producer, caused by aid to Poland; sluggish prices *for oil exports and* continued large grain imports following another poor harvest this year.

South Africa, the world's largest producer, has also suffered a worsening in its finances and has indicated it will have to sell all its gold production this year.

Bullion dealers in London and Zurich *say the* Russians have re-emerged as regular sellers *over the past two months.* Sales have continued during the past *fortnight, when the price at one* point recovered to above $430 *from its 21-month low* earlier in August at around $390.

Although the unloading seems to have been around the most extensive since mid-1979, the amounts have been fed to the market carefully so far and have not been large enough to rock prices.

But one London dealer said: "If the market were in a mood to go up, and the Russians continued to sell strongly, that *would keep any price rise under* wraps."

It is impossible to pinpoint the total of Russian sales because Moscow uses a variety of markets and methods to dispose of the metal.

A consensus of dealers' estimates is that between 60 and 80 tonnes have been sold so far this year, of which between one third and one half may have been sold in the last two months. *According to some* market reports, however, sales *so far this year may already* have totalled as much as 100 *tonnes.*

Russian gold sales last year were *generally* reckoned at around 80 tonnes, the lowest since 1971.

Most Russian gold is channelled into the West through Zurich, where the Soviet trading bank, the Wozchod Handelsbank, maintains an active dealing presence on the gold market.

The Russians have been trying to sell more bullion in the Far East. *Moscow is already* thought to have customers in *the Japanese jewellery and* electronics industry, where Soviet gold is highly prized on account of its exceptional 99.99 per cent purity.

Record Australian takeover bid

BY GEORGE MARSHALL IN SYDNEY

*MR ALAN BOND, the Perth-*based entrepreneur and yachtsman, yesterday launched the largest personal takeover bid ever made in Australia when he *offered* A$121m (£75.25m) for slightly over 60 per cent of Swan *Brewery, Western* Australia's only brewing group.

Swan, which has so far been *left out* of a wave of brewing mergers, has looked increasingly *vulnerable* as Mr Bond has built up a stake of nearly 20 per cent through *Bond Corporation,* his main holding company.

The surprise in last night's *statement* was less that an offer had been launched than that Mr Bond *has* chosen to "go it alone" and make the offer in *his own right.*

Mr Bond, 42, has extensive property interests as well as large oil, gas and base metal investments through Bond Corporation, of which he owns half. He gained international *renown through financing* challengers in the America's Cup and other sailing competitions.

Bond Corporation has been extending its interests widely in the *past year.* It succeeded in taking Waltons, the Sydney *retail chain, and two weeks ago* launched an A$52m bid for Northern Mining, owner of a 5 per cent stake in the Ashton diamond mining venture in north western Australia.

Mr Bond's personal bid has the backing of Bond Corporation. He is offering A$2.50 a share, which values the entire capital of Swan at A$151.45m. This compares with a stated net asset backing of A$1.62 and a closing price on share markets *yesterday of A$2.20.*

The offer is conditional on 90 per cent acceptance by outstanding shareholders—excluding Bond Corporation. Finance will be provided by Wardley, Australia.

Before the *offer announcement* yesterday, Bond Corporation announced purchases of another 400,000 shares which lifted the group's holding, through Residential Developments Pty. to 19.83 per cent.

Chase cuts prime to 20%

By Paul Betts in New York

CHASE MANHATTAN, the third largest U.S. bank, reduced its lending rate to prime borrowers by half a percentage point to 20 per cent yesterday.

This is the first decline in the U.S. prime since major banks increased the key lending rate to 20½ per cent on July 9 taking the prime only one percentage point below the record set in December.

The move by Chase was followed by the First National Bank of Chicago and the Los *Angeles*-based Mitsui Manufacturers Bank. Wall Street *expects other major* U.S. *banks* to follow suit.

However, the Federal Reserve Board (FED) reaffirmed on Sunday that it would *maintain* its tight monetary policies despite increasing signs that the U.S. economy is heading towards a new recession.

Mr Paul Volcker, chairman of the Fed, said in a television *interview:* "We *have to* keep restraining the growth of money and *credit.*" *He added:* "We intend to stick with it," in reference to the Central Bank's restrictive monetary policy and also predicted "a rough period" in which monetary restraint will collide with high demand for money and credit.

Mr Volcker also acknowledged that Wall Street was increasingly losing confidence in the Reagan Administration's economic programme. "After years *of disappointment,* disappointment in pledges to balance the *budget and hoping that inflation* would come down . . . there's a certain *natural scepticism* out there, and we've got to work through that scepticism," he said. But he argued that monetary policy had to carry a "very heavy" part of the burden in fighting inflation.

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PRESIDENT REAGAN is *under increasing pressure to* trim the vast increases in *defence spending he had* planned for the next three years. Mr Murray Weidenbaum, chairman of the President's Council of Economic Advisers, said no part of the budget should be "sacrosanct."

£ in New York

	Aug. 28	Previous
Spot	$1.8580-8600	$1.8320-8340
1 month	0.66-0.75 pm	0.73-0.80 pm
3 month	2.23-2.33 pm	2.35-2.45 pm
12 months	6.75-6.95 pm	6.85-7.05 pm

West Midland workers 'may face pay cuts'

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

WAGE CUTS *may be on the* way for some Midland workers, according to Mr Reg Parkes, vice-chairman of the West Midlands region of the Confederation of British Industry.

Wages had been cut during the 1930s, and, because of the depth of the recession, some companies were again considering the possibility following the example set by Pan American World Airways. Pan Am last *week started discussions with* UK unions about a 10 per cent *pay cut is attempting to impose* worldwide.

Mr Parkes forecast that the West Midlands, once renowned *for its militant workers,* would set the pace in bringing down *pay settlements to "the very* low single figures." Most deals were already being struck at below 5 per cent. Many companies were deferring any increase.

"It is no longer a question of talking about what companies can afford to pay but what their customers can afford. There is no more money in the kitty," he said last night.

Major Peter Forrest, chairman of the West Midlands Engineering Employers' Association, said yesterday there was a mood of realism among workers. "Keeping your job is now so important. Employees *know that if they get a silly* wage rise jobs will go."

Shop-floor militancy has crumbled in the West Midlands, where unemployment has more than doubled in just 12 months. The level of jobles, already at 14.8 per cent, is rising faster than the national average—and employers are warning of another round of redundancies and possible closures.

Some union leaders privately admit their *weakness.* "Workers are demoralised and know there *is not point in industrial* action," according to one *regional official.*

The BL Cars pay talks on a scheduled November 1 review *date will prove a key test.* Shop stewards are demanding a £20-a-week rise — *worth more than* 25 per cent for the lowest paid —but there is little indication that the militant talk is likely to be translated into widespread industrial action.

The apparent lack of shop-*floor militancy* within BL is mirrored in engineering. Many *companies believe that,* whatever the outcome of national pay talks on minimum rates now under way, they may negotiate less inflationary deals at the workplace, as they did last year.

Within the region there are hopes that the new mood will survive the recession. Major Forrest said regional officials of *one large union had called for* a meeting with his association *to discuss jointly how to maintain* "the more reasonable *attitude to bargaining.*"

Some union officials believe *their negotiating power will* never return. One said: "The recession has polarised workers —into those with a job and those without. Those in work won't abuse their position for fear of the employment consequences."

In the event of an economic upturn, *many workers would be* opposed to their management *recruiting new labour, he said.* "They will grab the overtime *rather than run the risk that in* the next downturn it will be their job that goes."

Business leaders in the West Midlands, while grateful for an improved industrial relations climate, are increasingly concerned about the failure of the Government to stimulate the economy.

Mr John Warburton, director *of the Birmingham Chamber of* Commerce, said last night that, *without an autumn boost*—possibly through public sector capital projects—more redundancies and closures could still be necessary.

Export demand improves

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

EXPORT DEMAND for British manufactured products has *begun to recover, following* the fall in the pound against the dollar, the Confederation of British Industry's monthly trends inquiry shows this morning.

The inquiry, conducted in the first three weeks of August, provides further confirmation of the flattening out of the recession and indicates that any *recovery is likely to be slugish.* This is in line with other recent surveys, forecasts and statistics suggesting that the *worst of the recession may be* over.

The most positive point is the outlook for exports. There has been a sharp fall in the proportion of companies reporting below, rather than above, normal export order books. The balance is minus 44 per cent now compared with minus 60 per cent in April, though this

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Balsemao forms new Portuguese Cabinet

By Diana Smith in Lisbon

SR Francisco Pinto Balsemao, leader of the Portuguese Social Democrats, has formed a Cabinet. He will announce his team today to President Antonio Ramalho Eanes and the Government will be sworn in on Thursday or Friday.

A week ago, Sr Balsemao was invited by President Eanes to form a government—his second since January. He resigned as Premier on August 10 in a move aimed at defiating noisy diversaries in his own party and in the Christian Democrat Party, second strongest group of the ruling alliance.

The move worked: his opponents could not offer a suitable alternative. Having urged his former adversaries to take his side, Sr Balsemao agreed to return as Premier.

His second administration will be Portugal's eighth constitutional government since free general elections were restored in 1976. It has a strong stress on economic management and will also enjoy the presence of the Christian Democrat and monarchist leaders. Sr Balsemao insisted on this before he would agree to return.

Sr Diogo Freitas do Amaral, Christian Democrat chief, will be deputy Premier and Minister of Defence. The defence portfolio has been held by representatives of his party since the three-party alliance won a parliamentary majority in the 1979 snap election.

The leader of the environmentally-minded monarchists, Sr Gonzalo Ribeiro Telles, will be Minister of State with special responsibilities for the quality of life.

To strengthen the means with which to attack a $1.3bn balance of payments deficit, 17.8 per cent inflation, and a simultaneous need for rapid economic growth, Sr Balsemao has given a new Ministry of Economy and Finances to Sr Joao Salgueiro, a respected economist.

Sr Salgueiro has been jointly head of the state-run national development bank and the foreign investment institute. He emerged as a bright young economic thinker in the late 1960s, and this will be his first Cabinet post.

ANGER AFTER CHEYSSON-ARAFAT TALKS

Israel plans protest to Mitterrand

BY DAVID LENNON IN TEL AVIV

ISRAEL's ambassador to France will deliver a sharp protest to President Francois Mitterrand in Paris today over the weekend meeting in Beirut between the French Foreign Minister and the head of the Palestine Liberation Organisation, Mr Yasser Arafat.

The Israeli Foreign Ministry yesterday denounced Sunday's meeting between Mr Arafat and the Foreign Minister, M Claude Cheysson, which it said had delivered a blow to the Middle East peace process and "would encourage extremist violence."

The French minister and PLO leader met for 50 minutes at the home of Lebanese Premier Shafik al-Wazzan, a neutral site chosen after a diplomatic squabble over whether the two should meet at the PLO headquarters or the French ambassador's residence.

Israel, which opposes any recognition of the PLO, was particularly angry that the meeting took place only a day after a Palestinian attack on the main synagogue in Vienna left two people dead and 20 injured.

Israel's ambassador in Paris, Mr Meir Rosenne, will use the opportunity afforded by today's meeting with President Mitterrand, which had been arranged some weeks ago, to protest the meeting with Mr Arafat.

DAMASCUS — M Cheysson flew to Latakia, Syria, yesterday, to meet President Hafez Al-Assad after talks in Damascus with Mr Abdel-Halim Khaddam, Foreign Minister.

A Syrian Government official said the two Foreign Ministers met for two hours and discussed bilateral relations, the Middle East and international problems.

France and the PLO have apparently agreed to hold more contacts on the Middle East. Mr Arafat declared after the Beirut talks with M Cheysson that they would meet again but did not say when or where.

Arab diplomats said that two of Mr Arafat's closest aides, Mr Farouk Kaddoumi and Dr Ahmed Sidki Dajani, will visit Paris soon for talks. Mr Kaddoumi, who heads the PLO's political department, and Dr Dajani, who is a member of the PLO's 15-man executive committee, attended the talks between Mr Arafat and M Cheysson.

M Claude Cheysson (right)

Zimbabwe takes tough stance on land sales

By Our Salisbury Correspondent

ZIMBABWE'S white farmers wishing to sell their land must first offer it to the Government rather than to commercial buyers, Dr Sekeramayi, the country's Minister of Lands and Rural Development, said yesterday.

The announcement reflects a significant hardening of the Government's stance on land ownership, Dr Sekeramayi said.

The Government was currently being forced to compete with commercial landowners to buy land for its resettlement programme. Some farms were being bought by individuals out of "self-interest," thereby inflating the price of land.

Machine tool gloom

Continuing high U.S. interest rates and an increasingly uncertain economic outlook have further depressed the country's machine-tool industry which reported at the weekend a 37 per cent drop in orders last month.

Flights suspended

Golden Gate Airlines, one of the largest U.S. commuter airlines, said it suspended all operations last Saturday because of the impact of the four-week air traffic controllers' strike, Reuter reports from Monterey.

Pulp mills run again

British Columbia's pulp mills resumed production yesterday, after successful mediation by the province's Labor Relations Board and the Provincial Labor Minister Jack Heinrich. The mills have been closed since July 16 over a pay dispute, writes Victor Mackie in Ottawa.

Kampuchea offer

Kampuchea has offered to ask Vietnam to withdraw the bulk of its troops from its territory provided Thailand stops supplying arms to the supporters of the former Pol Pot regime and confines them to camps away from the border, writes K. K. Sharma in New Delhi.

Fish 'war' talks

The Norwegian and Danish Foreign Ministers will meet in Copenhagen later this week to try to resolve a "war" over rights to fish in waters between East Greenland and Jan Mayen Island, reports Hilary Barnes in Copenhagen.

Protest to N. Korea

The U.S.-led United Nations command meets North Korea at the Korean border village of Panmunjom today to protest against the firing last Wednesday of a North Korean missile at a U.S. spy plane, Reuter reports from Seoul.

Honecker meeting

Herr Erich Honecker, East German leader, yesterday met Bonn's envoy to East Berlin in the latest move aimed at arranging a first summit conference between leaders of the two German states, AP reports.

Indian loan request

India yesterday asked the World Bank to lend it $120m (£65m) to conduct seismic surveys and exploratory drilling in onshore and offshore areas of the southern Andhra Pradesh state, Reuter reports from New Delhi.

Delors revives idea for two-tier interest rates in Europe

BY DAVID HOUSEGO IN PARIS

M JACQUES DELORS, the French Minister of Economy, has revived an idea he put forward in July for a two-tier interest rate structure for European currencies.

The timing reflects French concern that continually high interest rates originating from the U.S. will further stifle the Socialist administration's attempts to stimulate the economy.

M Delors repeated his proposal in Denmark over the weekend during discussions with Mr Ivar Noergaard, the Danish Economic Minister. Such a scheme would involve the creation of a European reserve currency with domestic interest rates split from an international rate which would be allowed to compete with the dollar.

At the French Ministry of Finance yesterday, it was being emphasised that M Delors's idea was no more than that and that no detailed studies had been carried out.

The French are well aware of the technical and political objections to the idea. Officials said it had been put forward because of the problems high interest rates posed in Europe and as springing from co-operation within the European Monetary System (EMS).

The proposal does, however, mark the revival of French pressure for co-ordinated action over interest rates. This was softened after the Ottawa summit when the French realised there was no budging the U.S. on monetary policy and when they expected interest rates to come down anyway.

M Jacques Delors

...Stewart Fleming adds from Frankfurt: It is understood that in the Franco-German discussions in July before the Ottawa summit M Delors raised the possibility of finding some mechanism through which a two-tier interest rate level could be established in Europe as a way of breaking the link between high U.S. interest rates and the pressure this was putting on European currencies in the foreign exchange markets.

In public the German Government has been careful not to appear too sceptical about the practicality of such an idea, because it does not want to cloud Franco-German relationships. However, it sees major problems with any such initiative.

Wages pressure tests French Government

BY DAVID HOUSEGO IN PARIS

A TEST of the French Government's ability to contain the country's accelerating inflation rate will emerge in the coming weeks during consultations between the Government and the main labour unions over the level of public sector wage settlements.

Prices in July rose faster than in any single month since January 1980 with an increase of 1.7 per cent in the consumer price index. Although this increase reflected some exceptional factors, there is expected to be continuing upward pressure on the rate in the months ahead as the strength of the dollar is reflected in the rise in import prices.

A further major determinant of the rate will be the level of public sector wage increases which are bound to influence private sector settlements.

The Communist dominated General Confederation of Labour (CGT), the largest union in the country has already drawn attention to July's inflation figures. It warned that under a left wing government there should be no decline in workers' purchasing power, but a real increase for those at the bottom of the pay scale.

A report in the Communist daily L'Humanité also said that the current inflation rate risked undoing the benefits of the rise in the minimum wage and social allowances that the Socialist administration announced on coming to power.

The unions have yet to fix precise wage demands. The CGT, however, is asking for a 10 per cent increase in real purchasing power for the 800,000 workers on the minimum wage as from today. The minimum wage is raised 3.7 per cent from today to FFr 3,017 (£274) a month in line with a price threshold system. The union also wants a selective freezing of some consumer prices which M Jacques Delors, Minister of the Economy, is resisting.

The Government's fear of any further rise in the minimum wage is that it could have a knock-on effect on wage levels through the rest of industry

India's foreign reserves show sharp fall

BY K. K. SHARMA IN NEW DELHI

INDIA'S foreign exchange reserves have plummeted suddenly. By the middle of August they had dwindled by more than Rs5bn (£300m) in six weeks, more than double the rate of the decline in previous months of the year.

Ominously, Rs4bn of the fall was due to the sale of large amounts held in the form of income-yielding foreign securities that had been built up to the high level of around Rs23bn in the past five years.

The Government decision to dip into these profitable reserves indicates the serious balance of payments position, the dimensions of which are becoming clear, and explain the decision to borrow heavily from the International Monetary Fund and world capital markets.

Part of the decline is attributable to the heavy imports of wheat, edible oil, and sugar in substantial quantities to make up for domestic shortages and for buffer stock purposes.

The yawning trade gap, estimated at more than Rs55bn in 1980-81, is eroding the reserves at a time when earnings from invisibles, such as remittances from Indians abroad, have reached a peak.

The reserves declined by Rs5.264bn from June 26 to August 14. This compares with a fall of Rs2.7bn in the same period last year. If this trend persists, the reserves will be falling at twice the rate of last year.

Foreign exchange reserves stand at around Rs36bn, including the value of gold held by the Reserve Bank of India. This is in contrast to the Rs42bn of two months ago. The reserves amount to a little more than three months of imports and can thus be said to be approaching a dangerously low level.

Part of the reason why the picture has remained hidden was a prolonged industrial dispute in the Reserve Bank earlier this year. The dispute was recently called off and the Reserve Bank has now brought all data up to date.

OECD report is critical

By Our Foreign Staff

THE OECD last night published a gloomy and extremely critical report on the economy of Portugal, the second-poorest country within the organisation as measured by GDP per head.

"The short-term forecasts drawn up by the secretariat suggest that the economic situation will deteriorate fairly sharply in 1981 and the greater part of 1982," the report said.

In figures, the secretariat forecasts a growth of GDP this year by 3½ per cent, shrinking to 3 per cent in 1982, as against 5.5 per cent in 1979. More recent estimates from Lisbon go even lower to only 3 per cent in 1981. The OECD records a rise of the consumer price index of 16.6 per cent in 1980, rising to 18½ per cent both this year and next.

It forecasts that the trade deficit will increase from $4.2bn in 1980 to $4.6bn (£2.4bn) this year and $4.8bn in 1982. Income from tourism and the remittances of Portuguese working abroad brighten that picture a little. The current external account last year was in deficit by $1bn, equivalent to 4.3 per cent of GDP. For this year the forecast is a deficit of $1.6bn.

Bread and flour prices triple in Poland

POLISH BREAD, flour and cereals prices went up threefold yesterday. The increases came on the first anniversary of agreements which followed strikes over food prices and resulted in the formation of the Solidarity independent trade union.

Solidarity holds its first national congress on Saturday, and is locked in difficult bargaining with the Communist authorities over how the official news media will cover the event.

Mr Janusz Onyszkiewicz, Solidarity's spokesman, said yesterday that the union would propose duel television coverage—one version by a state television newstream, one by a team of Solidarity-affiliated broadcasters.

The union's Warsaw news bulletin yesterday rejected government arguments that a break-up of the state information monopoly would be tantamount to an attack on Poland's system of government and Soviet Bloc alliances.

"The mass media should be in the hands of the working people and their organisations," the bulletin quoted the Polish constitution as saying.
Reuter

Six Arab oil states study possible economic union

BY SUE BOLTON IN BAHRAIN

THE FOREIGN Ministers of six Arab oil states were meeting last night in Taif, Saudi Arabia, to study the blueprint for an economic union in the Gulf.

The six, members of the recently-formed Gulf Co-operation Council (GCC) have agreed in principle to co-ordinate policies on oil, industry, finance, trade and banking and to allow the free movement of people, capital and goods.

The members are Saudi Arabia, Kuwait, Oman, the United Arab Emirates, Bahrain and Qatar.

The ministers will also be discussing Gulf security and will report to the next GCC summit

Security issues, especially anxieties over the Iranian revolution, the Iraq-Iran war, the military build-up in the Indian Ocean and the proposed rapid deployment force, were prominent among the reasons why the Gulf states decided to join together.

Oman, in particular, is disturbed by the pro-Soviet pact signed in Aden on August 19 by South Yemen, Libya and Ethiopia.

U.S. car industry prepares for price war

BY PAUL BETTS IN NEW YORK

A MAJOR price war is shaping up in the U.S. car industry and it is likely to break the traditional united front of the three main companies in setting similar price-tags on new models.

Chrysler is proposing to increase the average prices on its 1982 model cars by as much as 7.7 per cent or about $622 (£327) a unit. This is much higher than expected, and reflects Chrysler's problems of making an adequate return on its sales.

Like the other two major car manufacturers, General Motors and Ford, Chrysler has offered extensive rebates to promote its sales. But although sales have recovered for Chrysler, profit margins have been hurt by the rebates.

By increasing new model prices substantially, Chrysler intends to test the market. Subsequently, the car company could reduce the increases depending on the market conditions.

For its part, General Motors has also announced a higher than expected price increase of about 6 per cent or the equivalent of an average price increase of $617 a unit. Ford is likely to increase its prices by about 4 per cent.

While the car companies are seeking to enhance their return on sales, they continue to compete fiercely with rebate programmes.

US. decision to publish Soviet secrets welcomed

BY BRIDGET BLOOM

THE U.S. Government's decision to publish previously secret information about the worldwide Soviet military build-up has been warmly welcomed by the Ministry of Defence in London.

After months of uncertainty and what a British official described as "a really quite massive struggle in Washington," the Pentagon has announced that it would publish, in book form, its most up-to-date assessment of the military threat posed to the North Atlantic Treaty Organisation (Nato) by the Warsaw Pact.

According to a Pentagon spokesman, the book will be "the most massive de-classification of previously secret material in our history."

However, though the material is being published at the specific request of Nato Ministers of Defence, who believe that it may help them in their effort to win public support for increasingly controversial defence policies, there remains confusion as to when and how the book will be released.

According to British officials, the book will be issued under the imprint of the Pentagon and Mr Caspar Weinberger, U.S. Secretary for Defence. Already it is being irreverently dubbed "Caspar's little red book."

However, U.S. State Department officials maintained at the weekend that the material—which they say is not yet near to being assembled in book form—will be made available in the first instance only to European Defence Ministries. It will be up to them, say the officials, to decide how to use the material.

The idea of the book originated in last April's meeting of Nato's Nuclear Planning Group, which discussed the controversial decision to base nearly 600 U.S. cruise and Pershing 2 missiles in Europe against the background of a "grim and sombre" assessment of the Soviet military threat presented to the assembled Defence Ministers by Mr Weinberger.

Spanish N-plant protest

BY OUR MADRID CORRESPONDENT

AN ESTIMATED 10,000 demonstrators took part in a protest march in Bilbao on Sunday demanding the dismantling of the nearby Lemoniz nuclear plant which is being constructed by the Iberduero utility company.

The demonstration turned into a show of force for the guerrilla organisation ETA which has been responsible for regular bomb attacks on Lemoniz and on Iberduero power stations for several years.

The march ended in scuffles with police when ecologist slogans were replaced by calls for the release of ETA prisoners. One woman suffered a fractured skull after riot squads fired rubber bullets.

The demonstration came at the end of a week-long series of meetings and concerts in Bilbao to promote alternative energy. It served to underline the leadership of ETA and its political front Herri Batasuna in the anti-nuclear campaigns in the Basque country.

Iran killings threaten constitutional crisis

BY TERRY POVEY IN TEHRAN

ONE WEEK ago Iran's fugitive ex-President, Abol Hassan Bani-Sadr claimed from his place of exile in Paris that the death of five men would bring about a collapse of Ayatollah Khomeini's Islamic republic regime. The five were President Mohammad Ali Rajai, Premier Javad Bahonar, Mr Hashemi Rafsanjani, Speaker of Parliament, Ayatollah Mahdavi Kani, Interior Minister, and Ayatollah Moussavi Ardebili, head of the Supreme Court.

Two of those men are now dead, killed in Sunday's bomb blast on the first floor of the Prime Minister's heavily guarded office in Tehran.

Of the remaining three on Mr Bani-Sadr's "hit list," Speaker Rafsanjani and Ayatollah Ardebili together make up the presidential council that should rule until a new president is elected. This will be within 50 days according to the constitution. The third, Ayatollah Mahdavi Kani, heads the ministry responsible for both the police and the security organisations.

Yet unlike the previous major explosions which killed more than 70 Iranian politicians almost two months ago, the effect of Sunday's blast will be to threaten a constitutional rather than leadership, crisis.

Whereas Ayatollah Mohamed Beheshti who died in the June 28 explosion, played a political role that went far beyond his position (as head of the Supreme Court), this was not the case for either President Rajai or for Premier Bahonar —the two men who died on Sunday.

It must therefore be a hard blow to the Islamic fundamentalist regime of Ayatollah Khomeini that at the very moment when its capacity to rule is being most severely tested it now finds itself with, at best, a temporary government, a provisional presidential council and perhaps an interim premier for up to the next two months.

Under such circumstances there could even be temptations to set aside "inconvenient" parts of the Republic's constitution in order to deal with the current emergency.

Ayatollah Khomeini has quickly stressed to the nation that the Islamic revolution will not be defeated, but many in the crowd coming away from yesterday's funeral no longer looked as confident about that as before.

There is now a clear need for the Government to place itself above the terrorists but the instinct and temperament of many within the regime appear to be dragging it ever further into a deadly poker game.

Each terrorist incident over the last two months has provoked a round of executions and arrests and these in turn have been taken by the opposition to justify more attacks. So it has gone on, with the regime perhaps guessing that if it raised the stakes high enough its opponents would simply have to drop out.

Yet with more than 900 executions in the last two months this has not happened.

In all this there appears to be no concern on the part of the Islamic Republic's leaders to differentiate between the hard core of the opposition, the radical People's Mojahedin, the left, the nationalists or the monarchists, and its many sympathisers.

All of these, it appears, are equally to be condemned and state television daily displays members of various groups apparently repenting to the crimes committed by their organisations.

However, the opposition's real success has been to bring the Government down to its own level, making it appear as just one of the combatants in an increasingly violent power struggle.

Alongside this has gone the determination of the regime to pursue policies which are unpopular at the moment when it needs unpopularity least. Instead of showing magnanimity towards those of its vanquished foes prepared to be silent it has tended to reveal a spirit of revenge; instead of a *quid pro quo* for loyal support from officials and others a new round of purges is being launched.

It is within this atmosphere that speculation that Sunday's bomb was an "inside job" is significant. For even if in the most protected and screened circles there exists those willing to carry out such acts then stability and security could be a long time coming.

For its part, the opposition—whose backbone is the People's Mojahedin—is still a considerable distance from overthrowing Ayatollah Khomeini. Its aim appears to be to inflict continuing blows on the regime by removing its leaders and, by so doing, to divert it away from the many critical problems it faces.

Mr Massoud Rajavi, leader of the People's Mojahedin, claimed recently that his organisation had "at least some 12,000" guerrilla cadres underground in Iran, with a network largely untouched by the arrests of the past two months.

It would be wrong to suggest that the deaths of President Rajai and Premier Bahonar would lead automatically to the downfall of Ayatollah Khomeini's Islamic Republic. But what is clear is that the regime's response to the violent actions of its opponents has not worked and that more of the same will not necessarily work either.

The danger remains that in their anger and frustration the new leaders in Tehran will continue to fall into the trap set for them by their enemies. In so doing they may rob themselves of the legitimacy, based perhaps only on a limited consensus, that must be the basis of any regime in post-revolutionary Iran for at least the foreseeable future.

The former Iranian President, Abolhassan Bani-Sadr yesterday denied having any role in planning the bomb explosion that killed his successor as Head of State, Mr Ali Rajai and other prominent Iranians, David Housego writes from Paris.

Mr Bani-Sadr, speaking in a radio interview, said Mr Rajai and his Prime Minister, Mr Javad Bahonar, had been responsible for their own deaths. He described it as "suicide."

He said the assassination could not have been carried out without large popular support.

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New pact tightens Soviet economic ties with Vietnam

BY OUR MOSCOW CORRESPONDENT

THE SOVIET UNION and Vietnam have signed a long-term intergovernmental agreement which contains an extensive programme of power engineering in Vietnam and underlines the growing economic links between the two countries.

Tass, the Soviet news agency, says the new five-year agreement (1981-85) between the Soviet Union and Vietnam will cover several major projects in power engineering, and Soviet experts will draw up a master-plan for the development of electric power engineering in Vietnam until the year 1990, the report said.

The three large Soviet-assisted projects to be completed under the programme comprise: the 280,000 - kW electrical power station at Chian, a 640,000-kW thermal electrical plant at Falai and a Black River hydro engineering complex in the north. This last complex is Vietnam's biggest and will have a 920,000-kW power station.

The agreement also contains a total of a further 40 new industrial development projects and stresses close co-operation in coal and mining industries as well as in agriculture.

The plan foresees Soviet help in increasing production of the Kaoshon coal mines from 2m tons to 3m tons a year by 1985. The Vangzan mining complex will also be enlarged to increase production from the current 600,000 tons to 1.8m tons.

The Soviet Union is financing this industrialisation programme through credits which Tass says will be on "easy terms."

Soviet-Vietnamese trade stood last year at Roubles 612.4m (£437m) with exports of Soviet goods to Vietnam at Roubles 454.9m. Vietnam's exports to the Soviet Union were, as in recent years, at a low level totalling Roubles 157.5m.

Soviet exports to Vietnam are mainly industrial equipment. Soviet oil deliveries amounted to only Roubles 38.2m. The new agreement seeks a gigantic trade increase of 90 per cent by 1985.

As advocated by the Soviet Union and in line with practise of international work sharing in the Comecon group of nations, of which Vietnam is a member, Vietnam will be given the task of supplying more agricultural products and textiles to the Soviet Union in return for machines delivered.

Cotton, at Roubles 23.5m is already the largest item of Vietnam's exports to the Soviet Union, and the agreement calls for a Soviet feasibility study to develop a new cotton growing area in Vietnam of 25,000 hectares.

The Soviet Union also will provide aid to build up an initial coffee growing area of 20,000 hectares.

Implicit in the agreement is the fact that Moscow intends to build a network of economic links making Vietnam a stronger member of the Comecon bloc.

Bid for truck sales to Russia

WASHINGTON — The Commerce Department is reviewing a letter from a U.S. manufacturer asking whether it would approve resumption of equipment sales to a heavy truck manufacturing plant in the Soviet Union.

Mr Malcolm Baldrige, the Commerce Secretary, has received a letter from Ingersoll Rand, seeking the Administration's likely views on any request for export licences for sales of equipment to the truck plant on the Kama River in the Soviet Union, a Department official said.

The company also asked for clarification of the Administration's position on East-West trade. "No reply has gone out," the official said.

However, Department officials "do view heavy vehicles as one of nine sectors of manufacturing that would have direct military application. For that reason, they would be taking a close and critical look at applications (for export licences) in any of those nine sectors."

AP-DJ

Singapore seeks aviation growth

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

MORE THAN 120 companies in the aerospace and related industries will be exhibiting at the Asian Aerospace '81 exhibition, at Singapore's Paya Lebar Airport from September 23 to 27.

Singapore is already a rapidly growing overhaul and service centre for world aviation, and it has recently opened a new £350m international airport at Changi.

Singapore's objective is to expand its interests in aviation, not only in the maintenance and overhaul fields, but also into the manufacture of parts and equipment for aerospace.

Some of this kind of work is already being done for aircraft and engine manufacturers in the U.S. and Western Europe, but a big growth in this activity is sought.

Light engineering in aerospace and electronics, requiring comparatively low initial capital investment in terms of factory space, but with a high unit value for the finished products, is considered especially suitable for the Singapore work-force.

The Paya Lebar exhibition, organised by the Industrial and Trade Fairs group, is intended to show just what can be achieved in Singapore

Associated with the exhibition is a major two-day conference, organised by The Financial Times, on The Role of South-East Asia in World Airline and Aerospace Development, on September 24 and 25.

Among speakers at the meeting will include Mr Knut Hammarskjold, director-general of the International Air Transport Association; Mr Lim Hock San, director of Civil Aviation in Singapore; Mr Ngiam Tong Dow, chairman of the Singapore Economic Development Board;

GKN wins £27.1m mines deal in Zaire

By Our World Trade Staff

GKN CONTRACTORS, the project management side of the Guest Keen and Nettlefolds group, has won its third major contract in Zaire with a £27.1m commission to refurbish and re-equip tin and wolfram mines for Enterprises Miniere du Zaire.

The winning of the contract comes against the background of decline in Zaire mining industry consequent upon financial difficulties, lack of technicians, transport problems and, at least in the Shaba region, a lack of security.

GKN's work, involving the procurement and installation of new equipment, training programmes and transport services, is planned for completion by 1985.

Earlier work done by GKN Contractors in Zaire includes railway reconstruction and the construction of six regional airports, but the mines contract is the company's first major involvement in Zaire since 1977.

●Haden Drysys, once known as Carrier Engineering, a part of the Haden Group, has won what it thinks is the largest single order for the design and installation of car paint plants. It is a £20m contract from General Motors.

The company is installing plants at the GM works in Antwerp, Belgium and in Russelsheim, West Germany. Design, supply and installation of the plants is being handled from the UK, but Haden companies in France, Germany and the U.S. have been providing some equipment.

● The British drive to win more business in Nigeria has met some success with contracts awarded to ARC (Nigeria), the associate of Amey Roadstone Corporation, the quarrying and construction group, and Chas. F. Thackray, the Leeds surgical equipment manufacturers.

Recent construction contracts won by ARC (Nigeria), which in one form or another has been active in the country since 1975, have reached £50m in value.

Texas Pacific reaches agreement to export gas from Thailand

BY DAVID BUTLER IN BANGKOK

TEXAS PACIFIC THAILAND, one of the two Thai subsidiaries of North American oil companies involved in the exploration of the large natural gas reserves in the Gulf of Thailand, has reached an agreement with Thailand's PSA Group of Companies for the liquefaction and export of gas from Texas Pacific's concession.

Under the agreement, the PSA Group will handle all aspects of the liquefied natural gas (LNG) project's marketing, financing and development, while Texas Pacific will concentrate mostly on off-shore production of the gas.

Texas Pacific estimates show a total of 7.1 trillion cu ft of gas in that portion of the concession where it has already drilled. Texas Pacific and Government analysts believe there may be two or three times that much gas in the rest of the concession. Texas Pacific is a subsidiary of the Sun Company of the U.S.

Mr Paul Sithi-Amnuay, who is chairman of the PSA Group, said that initial investment in the liquefaction plant will be at least $1bn.

Mr Sithi-Amnuay said the project "will turn around the economy of Thailand," and he predicted that the exported gas could eventually earn Thailand $1bn annually.

Texas Pacific has already invested $145m in the exploration of the Gulf.

The other company operating in the Gulf is Union Oil of Thailand, whose reserves are believed to be smaller than those of Texas Pacific.

Texas Pacific and the PSA Group must now secure Thai Government approval of their plans.

Mr Sithi-Amnuay said that the project would fall through unless work could commence within 18 months. He said that while there are many sources of supply for natural LNG in the world there are only a few potential buyers—among them Japan, South Korea and possibly Taiwan.

U.S. energy project threatened

BONN—A proposed joint U.S.-West German coal gasification plant project in Wyoming is in danger of being cancelled, according to the West German energy group Ruhrgas, which has a one-third interest in the venture.

The company said it had decided, together with the other two equal share partners, Wycoalgas—a subsidiary of Panhandle Eastern Pipeline—and Pacific Gas and Electric, to reduce preliminary work on the project's first stage, estimated to cost $2.34bn (£1.27bn), and to postpone further planning for an unspecified period.

Ruhrgas said problems arose from sharply increased project costs, uncertainty about U.S. energy policy since the Reagan Administration took office and delays in expected granting of state financial guarantees.

The proposed plant, expected to have an annual output of 1.4bn cubic metres of gas, was announced last December.

France, E. German trade boost

PARIS—M. Michel Jobert, the French External Trade Minister, will confer with East German officials next week in an effort to reinforce trade relations and economic co-operation between the two countries.

M. Jobert will fly to East Germany on September 6 on the occasion of the Leipzig fair where some 100 French concerns will be present, a brief announcement from his office said yesterday.

The talks will take place against a background of improved trade exchanges between the two countries, with a comfortable surplus in favour of France.

During the first six months of this year French exports to East Germany jumped by 113 per cent to FFr 1.3bn (£118m) from FFr 616m (£65m) in the same period in 1980.

Main French exports in the January-June period were capital equipment FFr 352m, up 148 per cent over a year ago, spare parts for autos and heavy vehicles FFr 347m, up 143 per cent, farm products FFr 221m, up 317 per cent, chemicals FFr 138m, up 25 per cent, consumer durables FFr 116m up 137 per cent.

During the same period, imports from East Germany rose 6.6 per cent to FFr 579m from FFr 543m, leaving a net surplus for France of FFr 739m, compared with a surplus of FFr 184m for all of 1980.

AP-DJ

World Economic Indicators

INDUSTRIAL PRODUCTION

					Change over previous year %	Index base year
	July '81	June '81	May '81	July '80		
U.S.A.	153.4	152.9	153.0	140.4	+9.3	1967=100
	June '81	May '81	April '81	June '80		
UK	99.5	98.2	99.1	106.7	−6.7	1975=100
W. Germany	116.4	118.7	116.6	120.8	−3.6	1975=100
France	110.1	108.6	109.0	116.8	−5.7	1975=100
Italy	125.0	124.0	126.8	131.3	−4.8	1975=100
	May '81	April '81	Mar. '81	May '80		
Japan	142.7	145.0	144.6	143.0	−0.2	1975=100
Netherlands	109.0	108.0	110.1	114.0	−4.4	1975=100
Belgium	113.8	110.2	112.5	118.6	−4.0	1975=100

SHIPPING REPORT

Low demand for large oil tankers

By Lynton McLain

of crude oil tankers was limited last week apart from isolated charters from the Gulf oil market.

The market was "plagued with uncertainty," Galbraith Wrightson Tankers, London brokers, said at the end of the week. Most owners were simply operating on a day-to-day basis with little prospect of being able to plan far ahead.

The failure of the Opec meeting to reach full agreement on crude oil prices was one adverse factor, and one which was not offset by the decision by Nigeria to reduce her crude oil prices. Brokers had hoped that this cut would stimulate demand and counter cuts in production in the Gulf.

Demand for tanker tonnage in the Caribbean Sea, however, improved over the week and freight rates rose as a result. The prospect of the U.S. purchasing large quantities of oil from Mexico was welcomed by owners of tankers, but the start date for shipments was still uncertain.

On the dry cargo markets demand for large bulk grain carriers continued and rates were maintained. The market for smaller vessels, however, remained weak, especially in the U.S. Gulf-to-Japan market.

In Britain, the National Ports Council reported at the end of last week that the fall in the volume of conventional maritime cargo traffic is expected to continue to decline. Traffic passing through conventional berths will keep falling and by 1988 is expected to be almost 30 per cent below the level in 1978 with a forecast total of 16m tonnes likely to be handled.

Much of this traffic is already carried on specialised shipping but the tonnage carried by conventional shipping is expected to fall rapidly, to 3m tonnes, a 50 per cent drop compared with 1978.

Vickers to provide training for 500

By Barbara Dalzell

VICKERS, THE engineering group, is pioneering an engineering training and work opportunity scheme for about 500 unemployed youths.

The scheme has been welcomed by the Manpower Services Commission, which is working with Vickers to set up the scheme.

Existing training facilities will be used to provide one-year engineering courses for about 250 people, and 250 work experience places will be offered by the company under the Commission's youth opportunities scheme.

Already, 45 school-leavers have started a one-year engineering course at the Elswick works, Newcastle-upon Tyne, and 50 youths in the Crewe area are joining a community project organised by Rolls-Royce Motors.

The decision on whether schemes will be set up in other Vickers factories is up to local management but the Vickers managing directors' committee has instructed the operating division to give the scheme full backing.

Mr David Plastow, Vickers chief executive, says: "Vickers, with its engineering heritage, feels it should give a lead in helping solve the problem of youth unemployment. There is a tremendous wealth of talent among our young people which needs pointing in the right direction."

The engineering training scheme was developed after the company held a 13-week training course last year. Vickers felt the scheme did not go far enough and the year-long course was developed.

Vickers is non-commital about how many people will end up with permanent jobs as a result of the scheme.

The Manpower Services Commission is encouraging other companies to set up similar schemes. It hopes tens of thousands of similar opportunities will be available by the end of next year.

● The Government should pay employers a £2,000 subsidy for each new job they created. Mr David Bell, personnel planning manager of United Dominions Trust, the hire purchase and finance group says today.

Howe comes back ready for battle to maintain his strategy

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

SIR Geoffrey Howe, the Chancellor, returns to his Treasury office from his three-week holiday today faced with a series of major Cabinet battles this autumn to hold down public spending and maintain the thrust of his medium-term financial strategy.

The outcome will affect not only the political balance within the Cabinet but also the scope for tax cuts in next spring's Budget.

Within the next two or three weeks, the Cabinet will have to decide on the assumptions on pay and price increases to be included in the spending plans for 1982-83—with major implications for the public sector pay round.

The survey by officials of spending plans assured an average inflation rate of 7 per cent between the current financial year and 1982-83.

Ministers will now have to decide whether this is the right figure in the light of the slightly more pessimistic view being taken of the inflation outlook for next year since the survey assumption was made in the early summer.

The key issue is whether to have a single inflation assumption or—as in the past—to split it between pay and other costs.

The snag with spelling out a separate figure for pay bills is that this could be treated as a wage norm for the public sector and as a target to be beaten by the unions in negotiations (as 6 per cent was last winter).

However, if the growth of non-pay costs is significantly faster than of wages, as is likely next year, then two different assumptions may be necessary merely because of the varying proportion of labour costs in individual Government programmes and cash limits.

A further complication is the Government's commitment to the Megaw inquiry on fixing non-industrial civil service pay.

The decision on these assumptions may therefore not be totally clear-cut, but some view is necessary so that planning decisions on the level of programmes can go ahead.

The Treasury is clearly determined to hold down the pay element in public sector costs to a very low figure—possibly 5 per cent or less.

Over the next few weeks Mr Leon Brittan, the Chief Secretary to the Treasury, and spending ministers will discuss the latter's proposals for additional expenditure and Treasury suggestions for possible cuts.

Requests for spending beyond what was planned for 1982-83 in last March's White Paper amount to about £5bn, of which between £2bn and £3bn represents proposals for additional investment by nationalised industries. This compares with total spending of over £100bn this year.

After these bilateral discussions, the full Cabinet will become involved in late October and November, leading to a probable statement at the end of November.

Any review by Sir Geoffrey of the broad economic monetary outlook is likely to wait until early October after he returns from the annual meeting of the International Monetary Fund in Washington and when the initial Treasury forecasts are available.

There may also be a clearer idea by then of the underlying monetary and public borrowing positon.

British Telecom to open shops

By Michael Cassell

BRITISH TELECOM is to open 40 telephone shops in a bid to fend off competition from the large number of private telephone equipment suppliers expected to take advantage of imminent changes in the law.

When the Telecommunications Act comes into force on October 1, subscribers will be able to lease or buy telephones from British Telecom or purchase them from an independent retailer supplying compatible equipment. Until now, the connection of telephones not supplied by British Telecom has been ilegal.

If the customer purchases equipment from either source, however, a rental will still be payable to cover British Telecom installation and operational charges. British Telecom said yesterday that rentals may be reduced on equipment owned by the subscriber, although no decision had yet been taken, and might depend on the extent of competition.

One British Telecom shop selling equipment already operates within a Taunton department store and all 40 outlets planned for major centres will be on the same basis. Further shops could follow the first phase, at which time British Telecom might consider self-contained outlets.

The equipment ranges from decorative "period" style telephones, to Mickey-Mouse receivers and electronic memory telephones.

British Telecom said that all equipment installed would have to be approved, but would be vetted by an independent standards body to avoid any suggestion of commercial suppresion.

Healey camp presses Foot to help cut out Silkin

BY MARGARET VAN HATTEM

SUPPORTERS OF Mr Denis Healey are stepping up pressure on Mr Michael Foot, the Labour leader, to back their candidate for the party's deputy leadership in an apparent attempt to ensure the defeat of Mr John Silkin in the first ballot.

Indications of growing trade union support for Mr Silkin have caused alarm in the Healey camp, for if Mr Silkin should succeed, against expectations, in eliminating Mr Tony Benn after the first round, his chances of defeating Mr Healey in the second are now rated very high.

Mr Silkin has been generally regarded as a non-starter in the contest: nomination lists published at the weekend indicate him to be the first choice of a small minority.

Consequently, Mr Healey's campaign has concentrated on attacking Mr Benn and the constitutional and policy changes he represents.

Mr Foot's public declaration several months ago that he considered Mr Benn's candidacy to be divisive and damaging to the party was held to be tacit support for Mr Healey and he was not pressed hard for a more positive declaration of support.

However, the indications that the powerful Transport and General Workers' Union, whose leadership supports Mr Silkin, has been lobbying hard on his behalf among other big and as yet uncommitted unions, is leading many to reassess his chances.

Mr Foot's refusal, so far, to back any of the three candidates is beginning to be interpreted as tacit support for Mr Silkin rather than for Mr Healey. It is felt that this, in itself, could influence a large number of uncommitted Labour MPs.

Mr Healey's supporters are now urging Mr Foot to appear at the TUC Congress next week not only to warn unionists of the electoral dangers of supporting Mr Benn, but also give a more direct indication of support for Mr Healey.

However, those close to the Labour leader say he is determined not to state his own preference, at least until after the first ballot, "because it would be unfair to those supporting John Silkin."

Mr Healey's campaign will go into top gear this week when he returns from holidays abroad. He is planning to publish on Thursday a 40-page pamphlet of collected speeches and writings, outlining his policies on key issues.

On the same day, 20 prominent party members, including members of the Shadow Cabinet, trade union leaders and possibly Mr James Callaghan and Sir Harold Wilson, the two former party leaders, will publish an open letter calling for support for Mr Healey.

Mr Callaghan is also planning to back Mr Healey in an interview, due to be published on Thursday, while Mr Healey himself is planning to speak at a Solidarity fringe meeting at the TUC Congress and to take part in a three-way debate there with the other two contenders.

Meanwhile Mr Benn's supporters will this week launch a book setting out his views on party democracy and other policy issues. Mr Silkin, who is presenting himself as the candidate of peace and compromise, is, however, keeping a lower profile.

The campaign in the weeks before the vote on September 27 is likely to focus on resolutions sent to the party conference, published at the weekend.

In particular, attention will be drawn to a set of resolutions supported by 18 constituency parties calling for much greater control by the party as a whole over its MPs.

Presented by the Bennites as part of a move towards greater democracy within the party, they have already been described by the Healey supporters as part of a concerted campaign to reduce MPs to the status of puppets.

Lloyd's new council to rule on fee

By John Moore

LLOYD'S of London, the insurance market backed by private wealth, has told its 19,000 members that a new ruling council for the market, to be created by legislation, will have to decide whether the council members should be paid for their services.

A Lloyd's paper sent to all members this summer says that the council must decide by by-law whether fees should be paid in the future and whether it is correct for council members to be reimbursed for reasonable and proper expenses incurred by them in attending (council) meetings.

At present the 16 members of the committee of Lloyd's receive no fees.

The new Lloyd's council, the supervisory body of the Lloyd's market which will be created once the new Lloyd's Bill becomes law, will be composed of 16 working members of the Lloyd's market, eight members of Lloyd's who do not work in the market but who put up their capital to allow the market to function, and three outsiders unconnected with Lloyd's.

The 16 working members on the new council will form the Lloyd's committee, which will be responsible for day-to-day affairs affecting the market's conduct. It will continue with existing functions virtually unchanged.

Lloyd's has told its members that "there is no doubt that the election will pose problems. The selection of the candidates for whom to vote will not be easy.

"Already some 50 members have written to the chairman expressing a wish to stand for election. Underwriting agents (the groups which look after affairs of underwriting members), have received many more such expressions of intent."

The present committee of Lloyd's believes that the council will have to meet "at least twice a month, perhaps for a full day meeting, in the first six to nine months. It may then be appropriate to meet at monthly intervals and thereafter less frequently."

If the council did meet infrequently, it would leave much of the power in the hands of the committee, which meets once a week, and the working members of Lloyd's.

Lloyd's clings to three-year accounts, Page 9

When 'inaction is desirable'

BY DAVID FISHLOCK

BY DEMANDING instant fixes for long-term problems in our society, people were making sure that most of the important problems would never be solved, one of Britain's leading physicists told the British Association for the Advancement of Science in York last night.

Professor Sir Brian Pippard, Cavendish Professor of Physics at Cambridge University, in the inaugural address to the BA's annual meeting this week, said one of the major challenges facing democracies was whether people could exercise enough self-control to let government get on with its job.

"Modern methods of rapid communication, and the consequent satisfiable demand for immediate information and public criticism of every issue, may appear to herald the dawn of a golden age of democracy, when every man will play his part in a genuinely open society," he said.

Yet it was possible that the whole concept of open Government was incompatible with stability in society.

Control engineers understood that if the corrective action—the feedback—was too strong, there could be no way of stabilising the system.

Engineers had found ways of getting round the difficulty, but, when translated into political terms, "they all seem to imply the need for limiting the responsiveness of government."

There were circumstances in which a government ought not to acknowledge the existence of a problem, and act upon it, until the problem had been around for quite a while.

"This studied inaction is particularly desirable when the demand for action is strongest," he added.

The philosopher-king, wielding absolute power with disinterested wisdom, could translate such principles into practice. So could a modern dictator.

But a democratically elected government could not afford such detachment, if it hoped for re-election.

Sir Brian, in an address which attempted to examine the instability and chaos of society through the kind of physical models used to study the weather, for example, paid tribute to the difficulties faced by politicians and social reformers.

They had challenged problems of "enormously greater complexity" than scientists," he said.

"It would be no bad thing if, at prize-giving ceremonies, it was whispered in the ear of mathematicians and scientists, in their hour of triumph, that they had succeeded because they had chosen to tackle relatively straightforward problems."

Forestry group forecasts increase in investment

BY ROY HODSON

ECONOMIC Forestry Group, the leading private-sector company in the British forestry industry, is forecasting an increase in forestry investment as a result of revised government policies.

Mr John Campbell, chief executive of Economic Forestry Group, congratulates Mrs Thatcher for "at last giving British foresters a positive forestry policy" in an address to be given to a meeting of the forestry section of the British Association for the Advancement of Science in York this week.

The favourable response to the Government's recent policy statement on forestry is likely to lead to an increase in the national forest area by increased planting, he says. Financial institutions are expected to buy most of the large areas of quality productive woodland coming on to the market.

Mr Campbell's assessment of latest forestry policies is being welcomed in the tight-knit world of forestry which, last week, was shaken by an outspoken attack on the industry published by the Institute of Economic Affairs.

The institute's ninety-first Hobart Paper, written by Mr Robert Miller and called State Forestry for the Axe, advocates the dismantling of the Forestry Commission, claims Britain is at a natural disadvantage in afforestation compared with many other countries, and concludes that it is a waste of resources for Britatin to try to grow large plantations.

Mr Campbell, in addition to supporting Government forestry policy, urges pension funds to invest more heavily in forestry.

Help for new businesses

THE London Enterprise Agency, composed of nine major industrial and banking concerns, is to provide a course of seminars geared to the needs of new businesses among ethnic minority groups.

The agency already runs a training programme as a joint venture with the Greater London Council.

The new seminars are a response to recent disturbances in Britain's inner cities. The first course, aimed at black businessmen, will be in Brixton South London, on September 19. The speakers will include representatives from Barclays Bank, the Midland Bank, and the Industrial and Commercial Finance Corporation.

The agency said one of its most important roles was helping new businessmen to find sources of finance.

Major travel companies heat up holidays battle

BY ARTHUR SANDLES

A STRONG demand for household name package holidays — notably Thomson, Horizon and Intasun—may have given some smaller and medium-sized travel companies a bad year, in spite of an overall growth in the foreign holiday market.

There are now signs that the competition between the majors will be even fiercer next year. Most are planning substantial increases in capacity against predictions of market stagnation or decline.

If the more pessimistic predictions for 1982 are correct, some of the less aggressive companies could find themselves severely squeezed in the resultant marketing battle.

Britain's biggest tour operator, Thomson, sold 1m holidays this year, the first UK operator to hit this mark. It sold 700,000 summer holidays and 322,000 winter sun, and ski, trips.

Next summer alone, however, it has already set itself a target of 835,000, but is predicting an overall market fall of 5 per cent. Intasun plans a 16 per cent rise to 500,000. Horizon is planning to hit 400,000, which would be an increase of 17 per cent.

All are planning to do this by increasing their market share. The main targets are Cosmos and the British Airways tour-operating subsidiaries, Enterprise and Soveregin.

The past summer seems to have endorsed the major's belief that they could out-perform the market average. In a year when total traffic rose by around 5 per cent to around 4.4m package holidays, some majors saw business rise between 10 and 20 per cent.

Now they are going for further growth.

"We think next year is going to be tough, although ironically for the past three years we have been saying it will be tough," Mr Roger Heape, marketing director of Thomson Holidays, says. "I think 1982 will be more difficult. It does look now as if incomes are falling below the rate of inflation."

The major companies feel that the growth in holiday traffic to the U.S. will at best level off and that probably there will be a decline.

Intasun, which has a major stake in Florida holidays, is not increasing capacity to the U.S. Even the past few months have seen the effect of the rising value of the dollar. "This year we have seen a growth in European holidays but a decline in the U.S.," Mr Harry Goodman, chairman of Intasun, says.

The Great Universal Stores subsidiary, Global—which has sold 240,000 holidays this summer and has operated at a 94 per cent load factor (seats available compared with seats sold)—reckons that the U.S. holiday boom is over.

"Transatlantic air fares are expected to increase by as much as 15 per cent," Mr Robin Cattermole, managing director of Global, says. "This, together with the renewed strength of the dollar must signal an end to the rapid growth in North American holidays."

The strength of sterling against Continental currencies, particularly earlier this year when the companies were signing their contracts with hoteliers, has led to keen price competition in European packages. Companies are pricing their products below the inflation increases and cutting some tariffs.

British tour operators think that Spain—whose share of the British market rose from 40 to 42 per cent this summer—will again grow in popularity next year and that Italy will make a comeback.

Performing rights yield up to £39.3m

Financial Times Reporter

FEES collected by the Performing Right Society on behalf of its 13,000 members rose by almost a fifth last year to reach £39.3m, according to the 1981 Performing Right Yearbook.

The society, which represents composers and music publishers, has increased its efforts to ensure that all its members receive fees due to them.

The society has taken court action over the past year against unlicensed music users and has introduced a more effective method of licensing users of background music such as department stores and restaurants.

The society's income from broadcasting in the UK and Ireland amounted to £16.4m, 42 per cent of the total. Revenue from public performances in the UK and Ireland totalled £10.5m and from overseas music users £9.8m.

During 1980, the society inceased its membership by 851 to 13,462. Of these, some 10,042 were composers and lyricists, 1,900 music publishers, 23 copyright owners, and 1,137 successors to deceased writer members.

Performing Right Yearbook. Performing Right Society, 29-33 Berners Street, London W1P 4AA.

Bright outlook for double-glazing

High energy costs will ensure that double glazing remains a growth area in the window-manufacturing industry throughout the 1980's although the recession may lead to a temporary fall in demand.

A report by ICC Business Ratios, which examines the financial performance of 60 companies in the industry over three years up to mid-1980—predicts that the larger companies in the trade will continue to dominate the window replacement market and that window-makers will remain one of the most profitable areas of the construction industry.

"*Window Manufacturers,*" *ICC Business Ratios, 23 City Road, London, EC1. £80.*

Britain urged to 'push' quiet lorry

BY LYNTON McLAIN, TRANSPORT CORRESPONDENT

MR NORMAN FOWLER, Transport Secretary and president of the European Council of Transport Ministers, was criticised yesterday by the Council for the Protection of Rural England for failing to exploit the British invention of the "quiet heavy lorry."

Heavy lorries are controversial and are likely to become even more so later this year if Mr Fowler accepts pressure from the lorry-makers and freight transport interests to raise the current 32.5-tonne maximum laden weight of lorries to perhaps 40 tonnes without imposing strict controls on noise, vibration and pollution.

Britain once had a lead in "quiet heavy lorry" technology. Work was begun on this in 1971 as a joint venture between the motor industry and the Transport and Road Research Laboratory.

So far, however, says yesterday's protest letter to Mr Fowler by Mr Robin Grove-White, the council's director, nothing has been done by the Government to encourage the technology to be used or exported to other EEC countries — although "Britain could once again be exporting its technical know-how for the common good."

The noise of a pre-production quiet heavy lorry built over three years ago was measured as 80 dB (A), less than half as noisy as the 96 dB (A) of the heaviest lorries, equivalent to an unsilenced pneumatic drill at 8 yards.

A change of 10 dB (A) is equivalent to a 200 per cent change in perceived noise. The level of 80 db (A) was recommended by the EEC Commission in 1977 for lorry noise levels in all member States by 1985.

Mr Grove-White's letter urged Mr Fowler to use his position as the current chairman of the European Council of Ministers of Transport as an "unrivalled opportunity for Britain to take the lead in reducing noise limits to 80 dB (A)."

The letter says that this British invention could "dramatically reduce the growing problem of heavy lorry noise and increase British exports to the EEC." but it was being "starved of publicity and promotional effort by the Department of Transport.

"In discussions with the European Commission's transport directorate, we have been told that the UK Government has been by no means in the forefront of the battle to lower noise limits to 80 db(A)."

Base rates may rise, say brokers

BY OUR ECONOMICS CORRESPONDENT

THE GOVERNMENT may be unable to avoid a rise in clearing bank base rates and possibly mortgage rates before the end of this year, stockbrokers James Capel and Co. argue this morning.

The brokers predict that upward pressures on short-term interest could intensify over the next three to four months as £6bn to £6½bn in delayed taxes are due to be paid. However, by the end of the year these forces should have abated and some reduction in interest rates may then occur.

By this stage, according to James Capel, "loan demand and inflation could be on a cyclical upturn and may thwart any significant lowering in short-term interest rates. International factors could also conspire with domestic factors to keep interest rates at these higher levels if, towards the end of the fourth quarter, sterling is relatively weak overall and U.S. prime rates start to rise again."

Brokers L. Messel argue that the Government will do everything possible to prevent higher interest rates in view of the rise in unemployment and ahead of the Tory party conference. "This is an essentially political judgment. It demonstrates rather clearly that the notion of interest rates being determined by market forces is a fiction."

The brokers warn, however, about possibly disappointing domestic monetary trends with a rise in sterling M3, the broadly defined money supply, of perhaps 1½ per cent last month. They point out that the economy itself and the housing market are showing few signs of monetary relaxation.

In another new analysis, brokers Grieveson Grant discuss the prospects for the forthcoming pay round. After a rise in average earnings of about 12½ per cent last year, the firm projects a 10 per cent rate for the 1981-82 round.

The 12-month rate of retail price inflation is expected to stay in the range of 10 to 11 per cent until next spring with a drop to about 9½ per cent after the Budget.

Brokers de Zoete and Bevan note that industrial trends surveys highlight a rapid improvement in profit margins over the first half of this year and suggest that the stockbuilding cycle will turn around sharply. These surveys therefore indicate that investment may contribute more to the economic recovery than private consumption, contrary to previous cyclical patterns in the post-war period.

Coyness over spinoff from military aid

Bridget Bloom looks at a quiet debate among defence experts

THE ROLL of overseas students is inscribed on polished oak in the marble hall at Camberley, Staff College, Britain's premier staff officer training college. Those whose names appear there are entitled to put psc—passed staff college—after their names. For one country alone—Nigeria—this has included, over the past quarter century, two heads of state, half a dozen chiefs of defence staff, one foreign minister, a high commissioner to London, three regional governors and more than a dozen other very senior army commanders.

This sort of output from one of the British Army's most prestigious establishments has probably contributed to Britain's influence in a key African country out of all proportion to the size and cost of the programme which sent the men to Britain for training.

Yet many of those in charge of what the Ministry of Defence calls Britain's military assistance programme tend to be rather coy about it. They would like to boast about the programme's quality and its political effects and they do so occasionally in private. But officials, military men and even politicians seem frightened to blow the trumpet too loudly in public.

The main reason for this reticence, officials say, is that recipients of British military assistance fight shy of publicity. Most of the 84 foreign countries with military students in Britain might not mind admitting the fact, but most of those 27 states where Britain provides on-the-spot training, advice, or, in rare cases, actually runs the local armed forces, do not, it is argued, want the world to know.

Behind this problem lies a rather different one. Britain's military assistance programme has grown, if not like Topsy, then certainly without real planning. Stemming from the days of empire, it has tended to concentrate on Commonwealth or third world countries. It is seen by many as highly effective. Yet for 20 years now it has remained cheap, compact—and peripheral, both to the way Britain sees its own defence needs and to its foreign policy.

There are, however, signs that this might be changing. A lively debate is going on in the Ministry of Defence on whether—and if so how—the programme can be improved and possibly expanded. With fears of increasing third world instability — particularly in strategic areas like the oil-producing Gulf—those in the Ministry of Defence and in the Foreign Office who would like the programme to be strengthened appear to be gaining ground.

There are two essential elements of Britain's military assistance: training provided in Britain itself, and a whole range of services offered by Britain abroad.

Last year almost 5,500 foreign students were attending British military training establishments, nearly 4,000 of them from non-Nato countries.

Meanwhile about 750 British officers were serving abroad in a wide range of roles. In Oman, where Britain effectively runs the armed forces, about 100 British officers are on loan, and another 300 are on contract.

Other teams, though with somewhat lesser functions, are in Kuwait, Brunei and Zimbabwe. Nigeria and Saudi Arabia have training teams of over 50 officers, and 20 other countries have between one and 50 officers apiece.

King Hussein of Jordan takes the salute at Sandhurst. With military academies a common training ground for world leaders, defence chiefs are pondering the political returns from increased military aid.

Fiji for example, has one naval officer. Qatar also has one officer (though it may soon have more) and in Ghana half a dozen senior officers keep the Staff College going, trying, as one put it, "to keep the local army out of politics while the Ghanaian Government tries to sort out the economy."

The programme is organised by the Ministry of Defence and each of the three services has a small military assistance team comprising in all less than 20 officers. It comes cheaply. The Foreign Office disposes of about £9m a year in military aid, an increase over two or three years ago, given principally to countries of strategic importance which are unable to pay—or are likely ultimately to place defence contracts with Britain. Zimbabwe, for example, has been a major recipient over the past 18 months.

Oil-producing Nigeria, however, pays for all the assistance it gets, as do all the Gulf and the majority of other countries. "Income" from services rendered is said to be running at just over £80m a year, giving a total military assistance programme of just £90m.

By contrast, Britain's total defence budget this year is £12.3bn and its total aid programme £861m.

On September 16 John Nott, British Defence Minister, sets off on a tour which will include Egypt, Jordan, Nepal, Hong Kong, Malaysia and Thailand — all countries which have either sent officers for training in Britain, or to which Britain has given other military assistance. Does such military aid lead to arms sales? Mr Nott no doubt will hope so, even though officials deny that is the main purpose of his forthcoming visit.

Arguments as to whether the military aid programme should be made more central to foreign policy obviously centre on the political impact and economic spin-off (in terms of arms sales, principally) such programmes are held to have, difficult though that is to quantify.

Experts inevitably differ, for example, in their opinion of the extent to which Britain has helped stabilise the key Gulf states, particularly in the wake of the Iran/Iraq war, although no one doubts that British influence has been important and could be even more critical for the security of Western oil supplies in the future.

Likewise in southern Africa, some would argue that the assistance of a 160-man team in integrating and retraining the Zimbabweian armies after the civil war has been a vital contribution to stability in the area as a whole—though others might see this as an exaggeration.

Those who oppose expansion in the military assistance programme—to be found mainly in the Ministry of Defence—believe that its political importance can be exaggerated. They also argue that any expansion beyond its present capacity could only be to the detriment of the declining and increasingly resource-starved British forces.

However, those behind the move to push the military aid programme nearer to the centre of the politico-military stage say it is critical that Westminster should recognise the programme's political importance. There are the inevitable references to how the French—who not only maintain a much larger military programme in their former colonies but are deemed to be more aggressive in offering military assistance and promoting arms sales—do things better.

Critics say Britain is altogether too gentlemanly. But even those who believe that the gentle approach is likely to be more productive in the long run acknowledge that there should be much more co-ordination within the British effort.

Thy also argue that Britain could be pricing itself out of the military assistance "market." According to senior officers, where Britain trains one pilot, Canada will train two and India three.

STATES WITH BRITISH OFFICERS ON LOAN

Teams of over 100
Brunei
Kuwait
Oman
Zimbabwe

Teams of over 50
Nigeria
Saudi Arabia

Smaller teams
Australia
Bahamas
Bahrain
Bangladesh
Barbados
Belize
Bermuda
British Antarctic Territory
Falkland Islands
Fiji
Ghana
Hong Kong
Malaysia
Mauritius
New Zealand
Qatar
Singapore
Sri Lanka
Sudan
Swaziland
United Arab Emirates

FT shopping basket index falls again

BY OUR CONSUMER AFFAIRS CORRESPONDENT

THE FINANCIAL TIMES Grocery Prices Index in August fell for the second month running, mainly as a result of lower prices for fresh fruit and vegetables.

The August index stood at 135.50 compared with 136.62 in July. The August index fall is only the second time in the past year that the index has been lower than the previous month.

Over the past year, food prices in general have been gradually rising as food manufacturers' costs have risen and competition between grocery retailers has eased slightly.

However, it is normal during mid-summer for fresh fruit and vegetable prices to fall rapidly as a result of plentiful supplies coming onto the market. In July, the cost of the fresh fruit and vegetable section of the basket fell by 6.4 per cent over the previous month. In August the fall was 6.2 per cent.

Apart from the drop in fresh fruit and vegetable prices, the cost of fresh meat bought by FT shoppers was also less this month. The meat section of the basket fell by 2.2 per cent, from £576.98 in July to £563.96 in August.

The index is meant only as a guide to trends in food prices. It should not be taken as an absolute indicator of the level of food prices. These can vary considerably according to the type of shop and location.

The index is based on data collected by 25 FT shoppers who monitor a list of more than 100 items each month in the same shops. The shops chosen range from small village grocers to large superstores.

Apart from the fall in fresh meat and vegetable produce in August, most other sections of the basket cost more than the previous month. The only exception was the canned goods section, lower in cost because of special promotional offers in some of the supermarkets monitored.

Since August last year the grocery prices index has risen by 5.5 percentage points with increases spread evenly across most sections of the shopping basket. The exception has been dairy produce, which has risen in cost by nearly 9 per cent over the year.

Prices are expected to maintain their steady rise in the autumn, especially when cheaper seasonal produce comes to an end.

However, there are signs that some of the major supermarket chains may be gearing themselves up for a major promotional offensive later in the year to boost sales volume.

The FT Grocery Prices Index is copyright and may not be reproduced or used in any way without consent. All inquiries should be made to Lucinda Wetherall at the Financial Times.

FINANCIAL TIMES SHOPPING BASKET
AUGUST, 1981

	August £	July £
Dairy produce	684.75	678.98
Sugar, tea, coffee and soft drinks	210.09	209.10
Bread, flour and cereals	316.74	315.61
Preserves and dry groceries	114.26	113.59
Sauces and pickles	53.92	53.69
Canned goods	195.90	197.49
Frozen foods	240.90	242.59
Meat, bacon, etc. (fresh)	563.96	576.98
Fruit and vegetables	256.73	273.98
Non-foods	243.77	242.91
TOTAL	2,881.02	2,904.92

1980: January 120.47; February 122.32; March 124.18; April 125.94; May 128.79; June 128.53; July 129.04; August 128.41; September 127.41; October 126.84; November 127.77; December 129.38.

1981: January 130.96; February 131.75; March 132.75; April 134.93; May 136.30; June 137.37; July 136.62; August 135.50.

UK NEWS

Aiming Irish smoked fish at English market

THE LIBRARY in Mr Richard Heygate's 18th century house in a remote corner of Northern Ireland near Limavady and the shores of Lough Foyle is magnificent. But his attention is fixed more on a simple diagram on an easel showing the consumption pattern of delicatessen products in the UK by socio-economic class.

"Fifty-eight per cent is bought by the C1s and C2s—the middle of the market, particularly working wives," Mr Heygate, a former IBM marketing man, says with the air of someone who has discovered a great truth.

THE NEW ENTREPRENEURS

By Raymond Snoddy

From his estate, once named Ballymergie (place of the bog) but (luckily for his brand name) renamed Bellarena (beautiful strand) by the Earl Bishop of Derry in 1760, he is going straight for that middle market with oak-smoked salmon, trout and pates.

He hopes his company, Bellarena Fisheries, will be able to carve a slice out of the £500m a year UK delicatessen market increasingly being taken over by rising French and German imports.

Mr Heygate, a Balliol engineering graduate, who has worked for McKinseys, the management consultants in New York and London—"everything from knickers in Dublin to the Port of London Authority", has not dropped out to pursue a country craft. Rather, he has adapted traditional methods to an increasingly large-scale operation.

He has raised a total of £1.25m in grants, aid, loans and investment and by the end of this year, the first year of significant production, he expects the turnover of Bellarena Fisheries to reach £1m, the company to break even, and employment to rise from its present 35 to 100.

"We are aiming for a turnover of £5m within three to five years," the 41-year-old managing director says.

The idea behind Bellarena Fisheries is simple. Not only did Richard Heygate notice that the delicatessen market was growing by about 10 per cent a year and that imports were rising but he was also struck by by the absurdity that a country as rich in natural products as Ireland was sending much of its output abroad for things like smoking and processing.

"The delicatessen market is growing very rapidly but the people who are benefiting are the Europeans. In the UK sector there's Gentleman's Relish, Cooper's Oxford marmalade, Baxters and not much else," he says.

Now Bellarina fisheries takes salmon from all over the Foyle River system, including the River Roe which flows through the estate, white fish from Donegal, scampi and scallops from Kilkeel, mussels from Wexford, oysters from Strangford Lough, trout from all over Ireland and eels from Lough Neagh to smoke in its kilns.

Mr Heygate always wanted to start his own business. But in a sense the decision was forced upon him when his father Sir John Heygate died in 1976. He inherited a 400-acre estate too expensive to keep up but not grand enough to charge people admission to see.

Mr Richard Heygate hopes that salmon like these from his estate on the shores of Lough Foyle can help him break into the £500m UK delicatessen market.

He looked for something that would fit in with the house and the area and came up with delicatessen products.

Mr Heygate went to learn from Mr Richard Pinney in Suffolk "the man who re-invented traditional smoking" and began a three-year pilot project smoking salmon. He covered his costs by selling to the catering trade and locally in Northern Ireland.

The expansion came with the help of £200,000 in grants from the Northern Ireland Government and £120,000 from the European Commission from a fund to encourage food processing in remote agricultural areas.

But the real problem arose over getting a distributor for his products in England.

"It was only last year that the market changed and such delicatessen foods as smoked salmon reached many supermarkets." So Mr Heygate decided to set up his own distribution system for his own brand rather than co-pack for English companies, and set about raising the extra £500,000 such an operation would cost.

James and Peter Longcroft, leading lights in Tricentrol Oil, who have a City investment company, came up with £300,000 for 40 per cent of the equity.

And in April the Northern Ireland Development Agency, partly impressed by the external investment, came up with another £300,000 in preferred shares.

Now smoked salmon and more than 100 other products from Bellarena are on the move to supermarkets from premises in Heygate Street, at the Elephant and Castle, London. The street was named after Richard Heygate's great great-grandfather, who was Lord Mayor of London in 1822.

Instead of advertising, Mr Heygate, a keen amateur cook, has produced a recipe book to be given away free to customers.

But Mr Heygate's ambitions stretch further than selling his own fish products. He has dreams of running the Irish equivalent of an oriental trading company, with Bellarena offering distribution and marketing expertise to family-based food companies in Ireland which have found it difficult to break into the British market.

Last week the company began marketing a frozen gateau under the brand name Salzburg, manufactured by another Northern Ireland company.

Talks are under way with several other Irish food companies for similar arrangements.

Ford to launch revised Fiesta

BY JOHN GRIFFITHS

REVISED VERSIONS of the Fiesta small hatchback are being announced today by Ford. They include a new 1600 cc sports model, the XR2, developed by the company's "special vehicle" engineering department established to develop specialist and high performance derivatives of volume production models.

The first vehicle from this unit was the 2.8 Injection Capri, which went on sale throughout Europe three months ago.

Changes to other Fiesta models include revised suspension, seating, and other interior fitments.

Though displaced from third place in the list of Britain's top selling cars in July by BL's Metro, the Fiesta in the first half of the year was the market leader in the small hatchback sector. It accounts for nearly 8 per cent of all new registrations.

While the total market so far this year is down by 8 per cent. Fiesta registrations have risen by more than 18 per cent.

The new XR2 model will go into production next month and should be on sale in the UK towards the end of the year.

● BMW is raising the UK prices of its cars from today—its first increase since February last year.

BMW says the average price increase is 2 per cent. However, most of the range has had specifications upgraded, producing increases of up to 8.5 per cent.

The increases apply to all models except the 5-Series medium saloon. New models of he 5-Series will become available in Britain at the end of October.

BMW has avoided discounting during the past year of recession in the UK new car market. But it has been able to use the extra margin of profitability derived from the strength of sterling against the Deutsche Mark to hold its prices.

Delta Steel Company Limited Aladja, Warri, Nigeria.

International Notice of Prequalification For the supply of a combined Cycle Power Plant for Delta Steel Company Limited, Aladja.

The Delta Steel Company will soon invite selected firms to bid for a gas fired combined cycle power plant in the 450 to 550 MW range, to be built near its plant at Aladja.

The proposal is to include the design, manufacture, transport, erection and commissioning of the following:

A) Four gas turbines with associated waste heat steam generators,
B) One Steam turbine with condenser and natural draught cooling tower.
C) Five generators, totalling 450 to 550 MW - 50 Hz - 0.9 power factor.
D) Three step-up transformers for connection to the 330 KV network, one per set of two gas turbines and one for the steam turbine.
E) One double circuit overhead line, one circuit to be installed immediately connecting the step-up transformers to the 330 KV Gas Insulated (SF6) Switchgear.
F) One additional 330 KV bay to the existing double bus substation.
G) All auxiliaries for the above mentioned equipment, including a central control equipment.
H) All associated civil works, including site preparation, fencing, roads, foundation and buildings.

The Power plant will normally be connected to the national grid, but must be capable of operating independently and of supplying power to a steel plant with fluctuating active and reactive load.

Load fluctuations could attain 115 MW and 134 MVAR. Extension of the power station up to 900/1000 MW should be possible. It is essential that power from the gas turbines be available at the earliest time. The station will therefore be commissioned in two phases. Bid documents will be available in October 1981. Interested firms have to provide in triplicate by September 21, 1981 information such as:

(i) Experience in manufacture of combined cycle power plant for similar environment
(ii) Capabilities with respect to organisation and personnel
(iii) Financial status

One copy shall be sent to:

The General Manager,
Delta Steel Company Limited,
Aladja,
P. M. B. 1220,
Warri,
Bendel State,
Nigeria

Two copies shall be sent to the Consultants,

G. F. Appio & Associates,
37, Campbell Street,
P. O. Box 3600,
Lagos
Nigeria

REPUBLIC OF ARGENTINA
HIDRONOR

Hidroelectrica Norpatagonica Sociedad Anonima
Alicura — Abasto
500 Kv Transmission System

a—Contracts 585—586
Prequalifications of firms
Electro-mechanical erection and civil works for substations

HIDRONOR S.A. requests local and/or foreign firms or consortiums of firms to submit technical and financial background information for prequalification to participate in the following bids:

a—1. Contract 585
Electro-mechanical erection for substations

a—2. Contract 586
Civil works for substations

Documents for the prequalification process can be obtained at:

HIDRONOR S.A.
Contracts Department
379 Pte. Yrigoyen — 7th Floor
8324 Cipolletti, Rio Negro, Argentine Republic
Telex: 84116 hinor ar

or at:

HIDRONOR S.A.
1074 Leandro N.Alem, 4th Floor
1001 Buenos Aires, Argentine Republic
Telex: 22240 hinor ar

as of August 31, 1981 from 10 am to 1 pm at a price of 400,000 Argentine pesos.

Requested information will be received only at second above address until November 24, 1981 — 3 pm.

HIDRONOR S.A. has made application to the Interamerican Development Bank (IDB) for financing of above contracts.

b—Contracts 580—581—582—583
Bids for: supply at the sites, erection supervision, site tests and start-up supervision of: autotransformers, reactors, 500 kv switchgear, supervisory and relay equipment and auxiliary services for substations.

HIDRONOR S.A. issues this invitation to bid on these contracts for the 500 kv Alicura-Abasto Transmission System Substations according to the following detail:

b—1. Contract 580
Autotransformers and reactors
Issue of bidding documents: September 7, 1981
Reception of bids: 3 pm, November 17, 1981

b—2. Contract 581
Circuit breakers, disconnect switches, potential transformers, current transformers, surge diverters and support insulators
Issue of bidding documents: October 15, 1981
Reception of bids: 3 pm, January 6, 1982

b—3. Contract 582
Relaying and fault locators, fault recorders, sequential events recorders
Issue of bidding documents: September 30, 1981
Reception of bids: 3 pm, December 15, 1981

b—4. Contract 583
Auxiliary transformers, diesel generator sets, batteries and chargers, alternating and direct current switchboards, medium voltage switchgear, control boards, tariff metering boards and other boards
Issue of bidding documents: December 1, 1981
Reception of bids: 3 pm, February 16, 1982

Bids shall be submitted according to the two envelope system: envelope no. 1 including bidder's qualifying background, and envelope no. 2 including technical and economic details of bid. Bids will be accepted for complete items according to each contract subdivision.

HIDRONOR S.A. will only accept proposals from bidders whose non-Argentine supplies are covered by loans previously agreed upon between financing agencies or institutions of the country of origin and HIRONOR S.A. the financing conditions shall be to HIDRONOR S.A.

Bidding documents can be obtained at:

HIDRONOR S.A.
Contracts Department
379 Pte. Yrigoyen — 7th Floor
8324 Cipolletti, Rio Negro, Argentine Republic
Telex: 84116 hinor ar

or at:

HIDRONOR S.A.
1074 Leandro N.Alem, 4th Floor
1001 Buenos Aires, Argentine Republic
Telex: 22240 hinor ar

as of the dates above mentioned, from 10 am to 1 pm at a price of 3,000,000 Argentine pesos.

Proposals will be received until above listed time and dates at

HIDRONOR S.A.
1074 Leandro N.Alem, 6th Floor
1001 Buenos Aires, Argentine Republic

SYRIAN ARAB REPUBLIC
ETABLISSEMENT PUBLIC DES EAUX DE FIGEH

Advertisement — No. 6282 — Dated 15.8.81
WATERTIGHTENING OF WATER SUPPLY RESERVOIRS AT WALI

DUE TO TOP URGENCY

Etablissement Public des Eaux de Figeh (EPEF) invites submission of quotations for watertightening of Water Supply Reservoirs at Wali area in Damascus, according to following conditions:

— Quantity: As stated in the Bill of Quantities prepared by EPEF, 23,000 m² approx.
— Bid Bond: 5% of bid value.
— Performance Bond: 10% of contract value.
— Completion Period: 5 months from order to commence.
— Bid Validity: 120 days from closing date of submission of quotations.
— Delay Penalties: 0.2% (two per thousand) of total contract value for each day of delay, not exceeding 20% of this amount.
— Import Licence: Shall be obtained by EPEF.
— Funding: The foreign currency component shall be financed from the World Bank and the Arab Fund.
— Submission of Quotations: Quotations shall be submitted to the Secretariate of EPEF with all supporting documents indicated in the Bid Documents certifying the bidders experience, together with a bid bond and a copy of the tender documents signed on each page by the bidder.
— All bidders of good quality and qualifications from countries members in the World Bank and Switzerland are invited to participate in tendering.
— Bid Documents may be obtained against $50 or equivalent in Syrian Pounds to be paid to the Etablissement Public des Eaux de Figeh, during official working hours from:

ETABLISSEMENT PUBLIC DES EAUX DE FIGEH
Contracts Department
Al-Nasser Street
Damascus, Syria

— Bids should reach EPEF by 2 o'clock pm, Saturday, 17 October 1981. Any bids that reach EPEF after this closing date or that do not have bid bonds shall be neglected.

President Director General of EPEF

CONTRACTS & TENDERS APPEAR EVERY MONDAY. THE RATE IS £24.50 PER SINGLE COLUMN CENTIMETRE. CONTACT JOHN WISBEY ON 01-248 5161

CHIEF MANAGER

National Bank of Fiji seeks a mature and experienced banker to fill the position of chief manager which will shortly become vacant.

Applicants should have not less than fifteen years experience in a senior management appointment having an extensive knowledge of advance appraisal and control, and most probably with previous overseas service in a developing country. The chief manager will report to the board of directors on all aspects of the bank's operations.

Initial salary will be Fiji dollars 25,000 with an expatriate allowance of Fiji dollars 10,000 other benefits include a gratuity of 37½ per cent of basic salary paid annually, subsidised housing and car provided. Generous leave including a mid term leave to United Kingdom.

Application marked "National Bank of Fiji (chief manager)" to be forwarded before 10 September 1981 to:—

FIJI HIGH COMMISSION
34 Hyde Park Gate
London SW7 5BN

Interviews will be arranged for selected applicants in London or Edinburgh

FIJIBANK

UNIVERSITY OF GLASGOW
FINANCE OFFICER

Applications are invited for the post of Finance Officer which will fall vacant on 1st April 1982.

The Finance Officer is one of the two principal administrative officers of the University. He is responsible for its accounting records and accounts, provision of financial data relevant to decision-taking in the special circumstances of a university, and for advising the University Court on financial matters.

It is expected that the successful candidate will have a professional accountancy qualification and will have had wide financial experience.

The salary will not be less than £18,480 per annum on Grade IV of the national salary structure for administrative staff, the rates for which have been agreed up to 31st March 1982.

Further particulars may be obtained from the Secretary of the University Court (Room 18), University of Glasgow, Glasgow, G12 8QQ, with whom applications (15 copies: 1 copy in the case of overseas applicants), giving the names and addresses of three referees, should be lodged on or before 18th September 1981.

In reply please quote Ref. No. 7823.

COMPANY NOTICES

NICHII CO. LTD.

NOTICE TO EDR HOLDERS

NOTICE IS HEREBY GIVEN that the Company intend to pay during November, 1981, subject to the Directors' approval, an interim cash distribution to Shareholders as of record date August 31, 1981. With effect from August 27, 1981 the shares will be traded ex-dividend in Tokyo.

Subject to Directors' approval of the dividend, Coupon No. 13 will be used for the purpose of claiming such dividend and is deemed to have matured on August 27, 1981. With effect from that date, Coupon No. 13 should be detached from any EDR presented for surrender and will not be issued with any new EDR.

In accordance with usual practice, the shareholders' register will be closed on September 1, 1981 and is not expected to reopen until the end of that month. Accordingly during this period it will not be possible to register the transfer of shares withdrawn against the surrender of EDRs. Subject to Directors' approval of the dividend, a further notice will be published stating the amount and actual date of payment of such dividend, together with the procedure to be followed for obtaining payment thereof, as soon as practicable after receipt of the dividend by the Depositary. Only upon such notice will any payment be made against presentation of Coupon No. 13.

EDR Holders are also advised that copies of the 1981 Annual Report of Nichii Co. Ltd. are available at the office of the Depositary, The Chase Manhattan Bank, N.A., Woolgate House, Coleman Street, London EC2P 2HD, and the Depositary's Agent, Chase Manhattan Bank, Luxembourg S.A., 47 Boulevard Royal, Luxembourg.

THE CHASE MANHATTAN BANK N.A.
London as Depositary.

August, 1981.

Damson Royalty Investments S.A.

IN LIQUIDATION

14, rue Aldringen, Luxembourg
R.C. Luxembourg b 17.193

NOTICE OF GENERAL MEETING OF SHAREHOLDERS

NOTICE IS HEREBY GIVEN that a general meeting of shareholders of the above-named company will be held at its registered office, 14, rue Aldringen, Luxembourg, at 11.00 a.m. on September 11, 1981, with the following agenda:

1. to hear the report of the Liquidator.
2. To appoint Fiduciaire Generale de Luxembourg, members of Touche Ross International as auditors to the liquidation.
3. To fix the date, time and place for a new general meeting called upon to hear the report of such auditors, to deliberate on the result of the liquidation and to resolve upon the dissolution of the company.

Shareholders are advised that valid decisions can be taken by a simple majority of shares represented at the meeting. Shareholders may vote by proxy. In order to be valid, all forms of proxy must reach the company at 14, rue Aldringen, Luxembourg, not later than 3.00 p.m. September 10, 1981.

According to Luxembourg law no one may vote either for himself or as proxy holder, for more than one fifth of shares emitted and two fifths of shares represented at the meeting.

Proxy forms are available on request at the Head Office of the company.

For and on behalf of Damson Royalties Investments S.A., in liquidation.

THE LIQUIDATOR

TENDERS FOR GREATER LONDON BILLS

1. The Greater London Council hereby give notice that Tenders will be received at the Chief Registrar's Office (Bank Buildings), Bank of England, London EC2R 8EU, on Monday, 7th September, 1981, at 12 noon for Greater London Bills to be issued in conformity with the Greater London Council (General Powers) Act, 1967, to the amount of £25,000,000.
2. The Bills will be in amounts of £5,000, £10,000, £25,000, £50,000, £100,000 or £250,000. They will be dated Thursday, 10th September, 1981, and will be due 91 days after date, without days of grace.
3. Each Tender must be for an amount not less than £25,000, and must specify the net amount per cent (being a multiple of one new halfpenny) which will be given for the amount applied for.
4. Tenders must be made through a London Banker, Discount House or Broker.
5. The Bills will be issued and paid at the Bank of England.
6. Notification will be sent by post, on the same day as Tenders are received, to the persons whose Tenders are accepted in whole or in part and payment in full of the amounts due in respect of such accepted Tenders must be made to the Bank of England, by means of cash or by draft or cheque drawn on the Bank of England not later than 1.30 p.m. on Thursday, 10th September, 1981.
7. Tenders must be made on the printed forms which may be obtained either from the Bank of England, or from the Council's Offices at The County Hall.
8. The Greater London Council reserve the right of rejecting any Tenders.

M. F. STONEFROST,
Comptroller of Finance.

The County Hall,
London SE1 7PB
1st September, 1981.

COMPAGNIE FRANCAISE DES PETROLES
US$20,000,000 6% 1965-1985

The US$1,303,000 redemption due on October 15, 1981 has been met up to the amount of US$1,210,750 by purchases in the Stock Exchange and for the balance of US$92,250 by a draw by lot which took place on August 19, 1981.

Taking account of all previous draws, the following bonds have been drawn:

N° 5376-5873 each of a nominal value of US$1,000.
743-775 each of a nominal value of US$250.

Outstanding amount after October 15, 1981: US$6,042,000.

Bonds drawn will cease to bear interest on October 15, 1981. Bonds presented for repayment must have coupons as at October 15, 1982 and subsequent attached and will be paid according to conditions shown on the bonds.

The Fiscal Agent
Banque de Paris et des Pays-Bas
Pour le Grand-Duche de Luxembourg

CHARTER CONSOLIDATED
Loan of FFr100,000,000
7.50% 1972/1987

The FFr5,000,000 redemption due on October 1, 1981, has been entirely met by repurchases on the Stock Exchange.

Outstanding amount after October 1, 1981 [illegible]76,000,000.

The Fiscal Agent
Banque de Paris et des Pays-Bas
Pour le Grand-Duche de Luxembourg

TRAVEL

FIRST-CLASS FLIGHTS at down-to-earth prices. Get the VIP treatment you deserve from the long-haul business travel experts 01-499 8173. St. James Travel (Air Agents).

PUBLIC NOTICES

THE SCOTTISH AGRICULTURAL SECURITIES CORPORATION p.l.c.

10½% Debenture Stock, 1989-91

Notice is hereby given that the Registers of the Corporation's above mentioned Debenture stock will be CLOSED for Transfer and Registration from 16th to 29th September, 1981, both days inclusive.

By Order of the Board,
H. J. McTurk, *Secretary.*
48 Palmerston Place,
Edinburgh EH12 5BR.
31st August, 1981.

CARDIFF CITY BILLS

£1.7m Bills from 25.8.81 to 24.11.81 at 13⁷⁄₃₂%. Applications £17m.

HALTON BOROUGH COUNCIL

£700,000 Bills issued on 26th August 1981, due 25th November 1981 at 13.21875%. Applications totalled £3.5m. £700,000 Bills are outstanding.

CLUBS

EVE has outlived the others because of a policy of fair play and value for money. Supper from 10-3.30 am. Disco and top musicians, glamorous hostesses, exciting floorshows. 189, Regent St. 734 0557.

GARGOYLE, 69, Dean Street, London, W1.
NEW EROTIC FLOORSHOW
"CLOSE ENCOUNTERS"
11-3.30 am. Shows at Midnight and 1 am. Mon.-Fri. Closed Saturdays, 01-437 6455.

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Trade with Korea

Mr Suk-Joon Suh, Minister of Commerce and Industry, will lead the delegation of Korean speakers at this important Euro-Korean Symposium, which will be held in Brussels on 16 and 17 September, 1981.

In addition more than 50 leading Korean industrialists will be participating to meet potential European partners to discuss opportunities for business development

This follows the Korean Government's decision to diversify and increase its source of imports from Europe.

European speakers will include

Viscount Etienne Davignon
Commissioner for Internal Market and Industrial Affairs
Commission of the European Communities

Mr. George H Turnbull
Chairman and Managing Director,
Talbot Motor Company Limited
Former Vice President,
Hyundai Motor Company

Dr. Reinhold Braun
Vice President,
Siemens AG International Operations

Fee £100 including all refreshments, lunches and conference documentation.

Euro-Korean Symposium

To: Financial Times Limited,
Conference Organisation,
Minster House,
Arthur Street
London EC4R 9AX
Tel: 01-621 1355
Telex 27347 FTCONF G
Cable: FINCONF LONDON

ORGANISED BY THE FINANCIAL TIMES CONFERENCE ORGANISATION

* Please register the following and invoice for ___ delegates @ £100 each
* Please send further details of the Euro-Korean Symposium
* Delete as necessary

Name ___
Company ___
Address ___
___
Tel ___

Liverpool dockers close to pay settlement

By Our Labour Staff

THE ANNUAL pay award for the 3,500 registered dockers at Liverpool could be settled by the end of this week after four months of protracted negotiations.

The final offer from the Liverpool Port Employers Association has been circulated over the past few days to the men individually by the Transport and General Workers' Union.

The proposals would give dockers an extra £11 a week for normal working, bringing their wage up to £89.50; an additional £22.42 for the mid-evening shift, bringing it to £107.85; and a further £33.14 for night work, bringing it to £125.50.

In addition there will be a 10 per cent increase on bonus rates, higher piece work money and a £200 lump sum representing the backdating to the first week in May when the award should have been introduced.

A representative wage for a five-day week will be £110 and the fallback pay when no work is available will rise by £11. In return there will be a number of important changes in working practices.

The employers have insisted on these to offset higher wage costs.

Rail unions' link-up takes effect today

BY NICK GARNETT, LABOUR STAFF

THE PACT setting up a federation of the two blue-collar rail unions, and which has as one of its objectives the eventual establishment of one union for the whole industry, takes effect from today.

The two unions are the National Union of Railwaymen and ASLEF, the train-drivers' union. The third railway union, the white-collar Transport and Salaried Staffs Association, is not affected.

Alongside the federation agreement, the two unions have also signed an agreement on membership and representation arrangements within British Rail and London Transport, an issue which in the past has caused the unions some difficulties related to grade demarcation.

Both agreements were signed at the TUC and with the help of its officials. Mr Len Murray, TUC general secretary said yesterday that the agreement on the Railway Federation of Unions was an historic step towards the target of one union for the industry.

The federation will meet annually. Its council, made up of 19 NUR and nine Aslef representatives, will meet in alternate months with provision for special meetings at the request of either union.

The council chairmanship will alternate between the two from meeting to meeting. Each union will provide a joint secretary who will draw up agendas. Decisions will be by majority vote but subject to a veto by one union.

The constitution of the federation—the creation of which might assist the unions in the current productivity talks with British Rail management lists eight main objectives.

These include working towards the creation the creation of one rail union; agreeing matters for negotiation and discussion with British Rail and London Transport "having regard to existing procedures and negotiating rights of each union;" and agreeing on questions of legislation affecting the rail industry and its employees.

It also includes assisting in the settling of differences and disputes between the constituent unions on the one hand and employers on the other; and assisting in the settling of differences and disputes which might arise between the unions.

A general objective is to promote the interests of the unions and their members.

The agreement specifies that the TUC is on hand to assist if the unions run into difficulties with the new structure.

Shorter work week agreements cover 5.5m

By Our Labour Staff

ALMOST 5.5m workers, representing more than half the country's manual labour force, are covered by agreements cutting hours to below 40 per week, according to the latest TUC report on working hours.

The TUC discerns not significant slackening in the trend towards shorter basic week agreements.

It also says that there are more than 150 agreements taking basic leave entitlement to beyond four weeks and considers that this is probably an understatement.

A five-week (25-day) holiday entitlement is becoming an increasingly attainable goal for manual workers, the report says.

● New draft regulations announced by the Department of Employment at the end of the last parliamentary session threaten to impede "attempts to improve productivity and competitiveness among commerce and industry in Britain," the Institute of directors says in a letter to Mr James Prior, Employment Secretary.

The regulations, if implemented, would make it more difficult for businesses to pass into new ownership, says Mr Walter Goldsmith, the institute's director general.

Build more power stations, says TUC energy review

BY MARTIN DICKSON, ENERGY CORRESPONDENT

CALLS FOR an expanded programme of power station construction and a £1bn scheme to increase UK energy conservation are made today by the TUC.

The recommendations are contained in a review of energy policy drawn up by the TUC over the past two years. The document will be presented to the organisation's annual congress in Blackpool next week.

The review supports "a balanced energy policy which avoids over-reliance on any one source. This means investment in coal, the development of nuclear power, and slow depletion of North Sea oil and gas."

It calls for a steady minimum ordering programme for new power stations of 2,000 Mw a year to meet demand for electricity in the 1990s and ensure the survival of the UK power plant industry.

This contrasts with the Government expectation that only 1,500 Mw a year of new capacity will be needed in the decade to 1992.

The TUC says the Government's programme has already slipped and that it might now be 1985 before a start is made on the next power station — the pressurised water reactor (PWR) plant to be built at Sizewell in Suffolk.

Because of this delay and the "grim" prospects for the power plant industry, the Government should order a further station of advanced gas-cooled reactor (AGR) design.

The report also calls for £1bn of Government money to be invested over the next four years in conservation programmes, including £300m for industry, £200m for initial work on district heating projects and £75m for private home insulation.

There should also be increased support for the development of coal-to-oil and coal-to-gas technologies and for industry wishing to convert boilers from oil- to coal-firing.

On the North Sea, the review says the Government should make a clear statement affirming the aim of limiting oil production in line with the needs of UK self-sufficiency.

It should also restore the state-owned British National Oil Corporation's right to a minimum 50 per cent equity stake in offshore production. BNOC should be invited to develop a base in refining, distribution and petrochemicals.

The Government should also abandon its privatisation schemes for the British Gas Corporation, including plans to end its sales of gas appliances.

TUC Review of Energy Policy. TUC, Congress House, Great Russell Street, London WC1 B3LS. £2.50.

Samuel Montagu post

Mr Michael Ward has been appointed a director of SAMUEL MONTAGU AND CO. Mr Ward will be joining the banking division. Mr Ward was a senior assistant director of Morgan Grenfell and Co.

★

HEPWORTH INDUSTRIAL PLASTICS, a member of the plastics division of Hepworth Ceramic Holdings, has appointed Mr Brian W. Davies managing director. Mr Davies was managing director of another divisional company, Fordham Plastics. He succeeds Mr Alan Bell who has left the company.

★

Mr Derek Fowler, vice-chairman of the British Railways Board, has succeeded Mr David McKenna as chairman of BRITISH TRANSPORT ADVERTISING. British Transport Advertising is jointly owned by British Rail and National Bus Company.

★

Following the merger of the two welding specialist manufacturers, Rowen-Arc and Max Arc, the new company, ROMARC, has appointed Mr Bruce Jelly and Mr David Pearson to the board. Mr Jelly takes up the position of managing director having joined the Ford and Weston Group, of which Max Arc was a member company in 1974. Mr Pearson, managing director of the Rubery Owen subsidiary, Rowen-Arc, has been appointed sales and marketing director.

★

Mr Jim Bassett has been appointed general manager of the internal communications systems division of PHILIPS BUSINESS SYSTEMS, communication and control division. He will be responsible for the UK business activities relating to intercom, paging and PABX telephone systems.

★

Mr Maurice Constant has joined CASSA DI RISPARMIO DELLE PROVINCIE LOMBARDE (CARIPLO) as London representative general manager of the bank's prospective London branch.

★

Mr Bramwell Sturman and Mr Roger Sutton have been admitted to the partnership of FRAZER WHITING AND CO. (chartered accountants).

★

Four directors have joined the main board of CROWNGAP, Ripley. The executive directors are Mr R. B. Corser and Mr J. Wood. Non-executive directors are Mr E. J. Hewitt and Mr R. Gorvin, both directors of F. Finance, the Co-operative Bank finance house, which owns 30 per cent of Crowngap.

★

HALIFAX BUILDING SOCIETY has appointed Mr T. W. Taylor as a secretary from September 1. Mr Taylor, formerly general manager of the Wakefield Building Society, joined the Halifax in 1976, where he is a mortgage controller. He will continue, as a member of the executive, to be concerned with the society's lending operations.

INSURANCE

Lloyd's clings to three-year accounts

BY JOHN MOORE

NEARLY three years ago Lloyd's of London was asked by the committee reviewing the functions of financial institutions, chaired by Sir Harold Wilson, whether there was any good reason for this insurance market to continue with a three-year accounting system.

Lloyd's, unlike insurance companies, keeps its accounts open for three years. Under the system, claims paid in the period of account—that is during the second and third years—are taken back to the original year in which the insurances were arranged. The losses are not debited to the year of payment; rather they are debited to the year of the inception of the policy.

No premium may be released from an account as profit before the expiry of the third year, when the year of account is closed and the required reserve is carried forward to a later year to meet unsettled losses.

Last week, Lloyd's reported record profits of £174.4m for the 1978 underwriting account together with the customary qualified warnings about the future trends of the 1979 and 1980 accounts which are of course still open.

Many claims will fall due for payment long after the close of the three-year account. Some, such as the latest series of asbestosis claims will come home to roost many years later.

Replying to the Wilson committee, Lloyd's said that it would prefer, if it were not so complex, a five-year accounting basis.

The three year system requires a portfolio transfer arrangement at the end of three years. Claims do not stop coming in at the end of an underwriting account, and provisions have to be made. The charge for the third year claims of an underwriting account has risen dramatically in the last few years, with probably the biggest rises being scored in the non-marine market.

Here, there are such unknowns as what to reserve on business with very long payout periods, like computer leasing losses or liability claims. In the 1950 underwriting year, for instance, the proportion of claims paid in the third year of the underwriting account was something like 37.6 per cent of claims. This has risen to 80 per cent of all claims, in the 1978 account.

In the important marine account, which provides the bedrock of Lloyd's profitability, the proportion of claims settled in the third underwriting year has risen from 53.03 per cent of all claims in that market in the 1950 underwriting year to 72.5 per cent in the latest reported accounts for 1978.

The situation may be distorted in the third year by the "reinsurance to close." In the closure of a third underwriting year a "reinsurance to close" account is arranged between members of the syndicate for the year about to close and usually the members of the syndicate of an "open" underwriting year.

A premium for this reinsurance is debited to the closing of the underwriting year and credited to the underwriting year which assumes the run-off liability.

The latest trends at Lloyd's indicated by the figures suggest several possible outcomes for the 1979 account which will be reported next year. The settlement ratio in the marine account of claims to premiums, while high, is nothing like the level reached in the aftermath of Hurricane Betsy in the mid-1960s.

Although the 1979 account had a poor first year with its settlement ratio reaching 32.6 per cent—the highest it had been at the end of a first year underwriting account since the mid-1960s—a better second year to the account pulled back the overall settlement ratio at the end of two years to about 31.5 per cent.

Though the marine market may be talking about a downturn in straight underwriting profits from the present £69.3m, it will gain considerable benefits from investment income. In the last accounts for the entire Lloyd's market, investment income accounted for over a third of the profits of £174.4m.

As for the loss-making aviation account of the 1978 underwriting year, there is little sign of an immediate upturn, although underwriters are now increasing rates. Warnings that that account will make a loss for 1979 should be taken seriously.

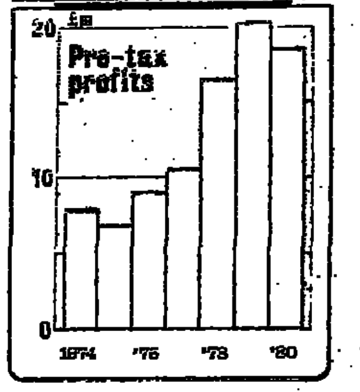
How specialisation saved a textile maker

Having foreseen the decline in its traditional markets, Fothergill and Harvey took early and successful action. Rhys David reports

THE GLOOM that has been hanging over much of Lancashire industry during the present recession has been punctuated at regular intervals over recent months by a string of altogether more encouraging announcements from one of the county's less well-known public companies, the industrial materials supplier Fothergill and Harvey.

In June the company disclosed that it has signed a letter of intent to form a joint venture with American Cyanamid to manufacture and market advanced composites for the European aerospace industry. This deal, from which the giant American chemical group clearly stands to benefit as much as its smaller UK partner, follows hard on F and H's acquisition for £4.9m of the London-based, H. D. Symons, an important supplier of high technology electrical insulating products. Also this year, a move has been made into fibre optics through the purchase of a 25 per cent stake in Focum, a Leeds-based company acquired by its management from the Rank Organisation.

F&H: a solid record



Critical

In February this year, too, F and H opened a new cable plant designed to meet growing demand for its high temperature wiring for aircraft, and other critical applications, and to house production facilities for a new type of cable, Exar. And although both F and H and its customers have been affected by recession, the group was able to increase turnover in 1980 by 6 per cent to £18.8m, with exports up 25 per cent. Margins were squeezed but the company managed, nevertheless, to contain its drop in pre-tax profits to 10 per cent at £1.8m, despite interest charges up from £109,000 in 1979 to £253,000, largely as a result of increased borrowings.

This represents a highly satisfactory performance when set against the recent record of many other British groups supplying semi-processed material to the rest of the industry, but it is made that much more remarkable by the company's history. Until 30 years ago, F+H was a mainstream Lancashire textile company, spinning and weaving cotton fabrics for garment makers, and merchanting these products from a block in the centre of Manchester. Even today, the bulk of the company's activities is in a number of old textile mills in the small town of Littleborough, close to the Yorkshire border. Its portfolio of products still includes textiles, but of a very different kind—high performance fabrics, the uses for which have included reinforcement for Concorde's nose cone and the hulls of minesweepers.

As an example of a company that saw that basic textile production would increasingly be taken over by lower cost producers elsewhere in the world and set out to take avoiding action, F+H has surely earned a place in the textbooks. Yet, just as important, its programme of diversification has not involved any major leaps into new and unfamiliar business areas—the mistake many companies in search of a new direction make — but in each case has represented a step sideways or forward into an allied area. Even today, Leslie Stevens, the company chairman, points out, with a spread of customers in the electrical, electronic, food processing, chemicals and aerospace industries, most of the products supplied can be traced back to fibres or processes developed originally for the treatment of fibres.

The company's first move, after the decision to run down basic cotton cloth production had been taken in the immediate post-war period, was to develop fabrics made out of the new synthetic nylon and polyester fibres for use in household textiles and in industrial textiles.

From coating these fabrics with new fluoro-carbon materials to give the non-stick properties required, for example in the food processing industry, the next logical step was into the cable industry, which was interested in friction-less insulation materials. Before this, arising out of the work it had done with the newer synthetic fibres, F + H had begun exploiting other materials, which were proving to be suitable for industrial textiles, such as glass fibre.

And the expertise it developed in this area in turn led to its early involvement in carbon fibre, the revolutionary new product developed in Britain in the 1960s. F + H is now one of Europe's biggest producers of processed carbon fibre materials for use by industries such as aerospace, which require extra strong components.

The moves made by F and H have enabled it to establish itself as a supplier of materials to growth industries rather than declining ones and it has been able to expand employment to around 1,000.

None the less, some 50 per cent of group turnover was still arising from industrial textiles in one form or another as recently as last year. With the problems of the rest of textiles —imports, poor margins and weak demand — beginning to spread to the less sophisticated parts of this sector, too, it became clear, Stevens points out, that the company needed to quicken the pace at which it was moving into newer technological areas.

A decision, therefore, was taken to withdraw from being one of the principal suppliers to the market of the less specialised fabrics such as nylon and polyester for plastic coating, albeit at a cost of around 134 jobs, and to push ahead instead with the various developments which have been unveiled over recent months.

As a first objective, the company has sought to use its expertise to make even more *sophisticated fabrics*, where there is less competition and consequently the prospect of greater returns.

Fothergill and Harvey Structures, at Winsford in Cheshire, has been set up to supply architectural fabrics—permanent lightweight translucent roofs for sports stadiums, shopping precincts, and similar large-spaces—with the main form of support being provided by pressure from air pumps.

"We have also been trying to grow faster outside textiles, organically and by acquisition, or by buying technology through licensing agreements," Stevens notes.

At the same time, the backing F and H has given to Focom will now extend the group's interests in wiring into the rapidly-growing fibre optics field.

F and H's willingness to buy into small companies like Focom and to acquire technology under licence in fields where it is relatively inexperienced ties in too with another fundamental element in the company's philosophy. Research is left to the bigger groups that can afford it with F and H seeing its role more in terms of the development of products arising out of this research.

Inevitably not all the fields F and H has tried have proved to be winners, but the company's response in these cases has been to try to establish alternative outlets for new products or, if this fails, to cut its losses quickly. Thus carbon fibre, for all its wonder properties, has been slower than expected to penetrate the engineering field.

Leslie Stevens: "We have been trying to grow faster outside textiles"

F and H executives remain convinced of its long term potential, however, both in engineering and aerospace—where its weight to strength ratio has enabled it to make some inroads—but in the meantime they have found less orthodox markets. The company supplies the blanks from which fishing rods are made as well as golf shafts and ski poles.

Technology

The biggest new market for carbon fibre, however, has proved to be in medical equipment. The material can be moulded to form a single piece operating table.

In the U.S. F and H has taken a 40 per cent stake in a new company, Oak-Fothergill, formed jointly with the leading supplier of fibre-reinforced X-ray couches to hospitals.

The programme of acquisitions has been financed by two rights issues in 1978 and earlier this year and although H. D. Symons — the latest and so far biggest buy — will take some time to digest, funds are available for further purchases if the right opportunities emerge, Stevens says. Any acquired company would be required to bring complementary new technology to the group or new markets for its existing range of products, but just as important, F and H is likely to be looking for companies with similar characteristics to those it has bought over recent years.

Whether F and H does make any more purchases this year depends partly on availability of suitable candidates. But there is also another significant factor. Jones Stroud, which also manufactures industrial textiles, now has a 23.19 per cent stake in F and H, following a further purchase of 3.4 per cent in May, but has said it does not intend increasing its stake in the short term. The company launched an unsuccessful bid for F and H in 1973, acquiring 38 per cent of the shares, but it later sold off a large block in exchange for representation on the F and H board.

The chance of an ultimate second bid—again likely to be unwelcome—will turn in large measure on the ability of F and H and its recent acquisitions to go on performing well in what will continue to be a difficult market for some time. Orders in the early part of this year were poor and the carbon fibre business in particular has suffered from the ending of the first production run of the Dornier Alpha-Jet air brake, the first time carbon has been used in a production aircraft in Europe.

The order input has been improving, however, and will be helped by the decline in sterling. As a result, Stevens told the annual meeting in May, the second half will be better than the first.

Benefits are expected, too, over the medium term from a new management structure currently being introduced which will give greater freedom for entrepreneurial initiative to operating subsidiaries and leave head office to concentrate on strategy. At present headquarters provides centralised services to parts of the group but this system has become less practicable as new subsidiaries away from Littleborough have been added.

The fact that Littleborough is a relatively prosperous little town in an area where closures have been almost the norm is testimony, in part at least, to one company's determination to go on being not just one but two or three jumps ahead.

Why Japan wins the quality race

THE SUCCESS of Japanese industry in making well-designed products, and using high product quality as a key marketing strategy, does not rest on a set of cultural conditions which are unique to Japan. Instead, Japan's "secret" is the way it manages the design and manufacturing process, where its co-operative principles are more effective than the individualistic departmental approach of many of its western competitors.

This is one of the main themes to emerge from an article about "The Japanese Lesson in Quality" in the U.S. journal Technology Review.* Though the article concentrates on a comparison between the management practices of the Japanese and U.S. motor industries, the conclusions drawn by the author, Professor Robert E. Cole of the University of Michigan, apply equally to other industries and other western countries.

One of the reasons why Japanese cars are better than their U.S. competitors in many respects, claims Cole, is that American managements have too often defined quality in its narrowest sense: as conformity to specifications, rather than "fitness for use" as defined by the customer. Conformity to specifications then becomes an end in itself, "the subject of dispute among different departments and specialties within the industrial bureaucracy, and the final user is forgotten."

Blaming this state of affairs on changing western attitudes to work—a common explanation—is unconvincing, argues Cole: "one can hardly attribute the Japanese improvements (in product quality) to a decline in the American work ethic."

The greatest source of automotive quality problems are weaknesses in engineering design, Cole claims. But they are minimised in Japanese companies by the nexus of co-operative relationships throughout design, engineering and manufacture.

By contrast, the design department in U.S. motor companies is assumed to be relatively self-sufficient, Cole observes. "Accustomed to a relative monopoly on product specifications, the design department tends to produce drawings with exact manufacturing details even though it is not necessarily best qualified to set parameters on reliability, maintenance and users' costs.

Quality control personnel also often lack the authority to veto engineering designs, Cole continues, making it unlikely that they will be able to resist pressures to meet other priorities at the expense of quality.

Not only should co-operation be increased between U.S. companies' management departments, counsels Cole, but also between managers and employees. Pointing to the "impressive" results of the quality circle movement in Japan, he quotes the following Japanese-U.S. comparison:

General Motors receives an average of 0.84 suggestions per eligible employee each year, of which it adopts about 23 per cent. Nissan, on the other hand, reported in 1979 a total of nine suggestions per employee and an adoption rate of 85.7 per cent, with more than 70 per cent of those suggestions made by groups, mainly quality circles. And in 1980 Toyota reported as many as 17.9 suggestions per employee, of which it adopted *close to 90 per cent.*

Isolation

In other words, "not only are these firms getting more suggestions, they are getting better ones," concludes Cole. But he warns against promoting quality circles in isolation: "in Japan [they] resulted from a long-range effort to upgrade quality and increase employee responsibility. But because many U.S. firms are introducing the circles with little preparation and coordination with other needed changes, we will probably see a large number of intitial failures."

bbmp

One way in which U.S. industries could start to encourage greater co-operation throughout their organisations is through reward systems, according to Cole. He questions whether companies reward their materials and components suppliers primarily for low prices or whether they also place a high value on quality. "Do we reward workers for simply following orders or for using their brains? Do we reward manufacturing staff merely for meeting production quotas or also for contributing to engineering design?"

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*** The Financial Times series of eight articles entitled "Learning from the Japanese" has now been reprinted in booklet form and is available from Diana Twaites, Publicity Department. Price £2 including p&p. Payments to be enclosed with order.*

Christopher Lorenz

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Derbyshire S40 2EB
Tel: 0246 73153

Computer Consultants
Compact 3000 Ltd.
The Limes
High Holborn
Sedgley West Midlands
Tel: Sedgley (090 73) 62331

Computer Equipment
M B S Rentals
119-120 High Street
Eton
Windsor Berkshire
Tel: 07535 55211

Computer Services
A S Punching Bureau Ltd.
Tel: 01-836 3525
Advanced Information Access Ltd.
183 Union Street
London SE1
Tel: 01-928 3821
Telex: 895 6034
Archway Information Management Systems Ltd.
P O Box 116
Wokingham
Surrey CR3 7YS
Tel: Woldingham 2434
Distributed Systems Ltd.
70 Borough High Street
London SE1 1XF
Tel: 01-403 3456/1568
Resource Computer Systems Ltd.
26-29 St James's Square
London SW1
Tel: 01-839 3271
Software Consultants (UK) Ltd.
Tel: 01-581 1805
Specialist Software Ltd.
44 London Wall
London EC2
Tel: 01-920 0522
Vantage Computer Services Ltd.
6 Poland Street
London W1
Tel: 01-734 9723

Computer Services Bureau
Computel Ltd.
Eastern Road
Bracknell
Berkshire RG12 2UP
Tel: Bracknell 26767/59811
Datema Ltd.
Colston Centre
Colston Avenue
Bristol BS1 4UH
Tel: 0272 291571

Computer Services/Software Specialists
Allegro Computer Services Ltd.
Abbey Mill
Bishops Waltham
Hants SO3 1DH
Tel: 04893 6266

Computer Stationery & Supplies
Datatrek (Southern) Ltd.
1 Brixton Road
London SW9
Tel: 01-735 9982/3

Concrete Products (Lightweight Blocks & Panel Specialists)
Cempol Sales Ltd.
Solent House
Royal Pier
Southampton
Tel: 0703 26243/0724 732146

Concrete Pump Suppliers
Burlington Engineers Ltd.
Unit 11
Perivale Industrial Estate
Horsenden Lane South
Greenford Middx
Tel: 01-997 1515

Concrete — Ready Mixed
Brazier Concrete Ltd.
Reynham house
65a Ware Road
Hertford
SG13 7EH
Tel: 0992 57971
Brazil Concrete Ltd.
Paices Hill
Aldermaston
Berkshire
RG7 4PG
Tel: 07356 3912

Concrete Reinforcing Steel
Derim Steels Ltd.
Station Road Industrial Estate
Clowne
Chesterfield
Tel: 0246 811456

Consultancy & Microprocessor Applications
Storegate Computing Ltd.
29/30 Brook Mews North
London WC2
Tel: 01-402 7479

Construction Equipment Manufacturers
Benford Ltd.
P O Box 26
The Cape
Warwick CV34 5DR
Tel: 0926 493466

Contract Manufacturers & Packers
A E Adams (Henfield) Ltd.
Unit 4
Mackley Industrial Estate
Small Dole
Henfield Sussex
Tel: 079155 3936
Telex: 877509

Contractors Plant & Equip
Craig Plant Ltd.
Tel: 01-556 1128

Conveyor Manufacturers
Conveyor Manufacturing Co. Ltd.
Woden Road West
Wednesbury
West Midlands WS10 7SF
Tel: 021-556 4585
Telex: 336897

Conveyors (Overhead/Floor) — Warehouse systems
Haden King Ltd.
Haden House
Argyl Way
Stevenage SG1 2AE
Tel: 0438 4300
Telex: 826137

Copying Machines (Office)
Arcade Copiers
4 Gladstone Parade
Edgware Road
London NW2 6JS
Tel: 01-450 6161/2/3/4

Corporate Finance
Allan Moore & Partners (Wales) Ltd.
26 Stow Hill
Newport
Gwent NPT 1JD
Tel: 0633 58246

Corrugated Case Mnfs
The English Corrugating Paper Co. Ltd.
28 Portland Square
St Pauls
Bristol BS2 8SE
Tel: 0272 49541/2/3

Courier Services
Airsystems Couriers Ltd.
23B St Thomas Street
London SE1
Tel: 01-407 9755
Telex: 884331
Arrowfast Express Ltd.
17/18 Eldon Way
Motorway Estate
Crick Northampton
Tel: 0788 822968
Overseas Courier Service (London) Ltd.
Tel: 01-928 3285
Skyway Intercity (UK) Ltd.
Centre Airport Hotel
Bath Road
Longford
Middx UB7 0EQ
Tel: 01-759 2400
Telex: 934093

Cranes — Overhead
J Barnsley Cranes (A Division of M B Wild & Co. Ltd.)
Overhead Road
Cradley Heath
Warley
West Midlands B64 7DW
Tel: 0384 66511
Telex: 336476
Cable: Barnsley's Warley
Verlinde Hoists Ltd.
The Croft Industrial Estate
Bromborough
Merseyside L62 3PT
Tel: 051-334 6241
Telex: 628379

Cushion & Cushion Cover Manufacturers
J & W Parker & Co. Ltd.
Joyable Works
78 Pretoria Road
London N18
Tel: 01-803 6781/5

Customs Clearance
Clearport Ltd.
9 King Street
Dover Kent
Tel: Dover (0304) 207195
Telex: 965337

Cutting Tool Specialists
Mohawk Cutting Tool Sales Ltd.
36 Regent Place
Rugby CV21 2PN
Tel: 0788 2025/6
Telex: 311158

Cutting Tools — Engineers
Osborn-Mushet Tools Ltd.
P O Box 37
Penistone Road
Sheffield S6 3AH
Tel: Sheffield 78622
Telex: 54304
An Aurora Company

D

Damp Coursing Specialists
Riverside Dampcoursing Ltd.
"Green Acres"
Howle Hill
Ross-on-Wye
Herefordshire
Tel: 0989 2388

Data Processing (Nuclear Medicines)
Link Systems Ltd.
Halifax Road
High Wycombe HP12 3SE
Tel: 0494 24145
Telex: 837542

Datsun Specialists
Cambell Symonds
Tel: 01-908 2955

Decorative Laminate Panel Fabricators
Palmer Plastics Ltd.
Russell Gardens
Wickford
Essex SS11 8BH
Tel: Wickford 5251

Demolition Contractors
Bullminster Ltd.
544 Harrow Road
London W9
Tel: 01-960 5267
Pick Hill Demolition & Site Clearance
Monkswood Yard
Pick Hill
Waltham Abbey Essex
Tel: Lea Valley 711860/711101
Rogers & Co. (RSM) Ltd.
Trane Works
Gilfach Goch
Porth
Mid Glamorgan
Tel: 0443 672872
T J L (Contractors) Ltd.
30 Balfour Way
Pitsea
Basildon Essex
Tel: 0268 555597
Tower Demolitions Ltd.
378 Upper Richmond Rd West
London SW14
Tel: 01-876 1178/9

Dental Crown and Bridge Work
Eagfleat Ltd.
15A The Precinct
Waterlooville
Hants PO7 7DT
Tel: 07014 58441

Dental Equipment Manufacturers
Denlees Engineering Ltd.
Unit 4
Falcon Road
Adelaide Industrial Estate
Belfast 12
Tel: 0232 665022

Design of Advertising & Graphics
Creative Technique
Cock Yard
82 Upper St Giles Street
Norwich NR2 1LT
Tel: 0603 613925

Design Installation/Air Conditioning/Ductwork
The Cool Air Company Ltd.
14 Seaforth Avenue
New Malden
Surrey KT3 6JP
Tel: 01-942-0541/949 5259

Diamond Drilling & Cutting
Cut-A-Way Ltd.
69-75 Newtown Road
Luton Beds
Tel: Luton 29740/413846

Diecasting, Press Work & Automatic Electrics
Farnworth Engineering Co. Ltd.
Heaton Mill
Harrowby Street Farnworth
Bolton BL4 7BW
Tel: Bolton (0204) 73881

Discastings & Sand
Heddondale Ltd.
Unit N
Creekside Industrial Estate
Stowage Deptford
London SE8
Tel: 01-691 4648

Dist Feeders/Farm Machinery
H West (Press) Ltd.
Tel: 0948 840465/6

Distribution, Haulage & Storage
Transport & Warehousing Facilities Ltd.
Tel: Dunstable (0582) 601226

Door Operators — Automatic
Besam Ltd.
Unit H
Holder Road Industrial Estate
Aldershot GU12 4RH
Tel: 0252 313831
Telex: 858724

Door Specialists — Industrial
Western Industrial Door Services
Park House
Park Hill
Whitecroft
Lydney Gloucester
Tel: Lydney (0594) 562566

Double Glazing/Aluminium Frame
Windowcraft
Bowes Field
Stockton-on-Tees
Cleveland
Tel: 0642 65910

Drag Chains & Installations
Kabelschlepp Ltd.
Unit 2
Britannia Road
Sale
Cheshire M33 2AD
Tel: 061-969 5418
Telex: 668546

Dress Manufacturers
Carib Dresses Ltd.
2nd Floor
Harymode House
Clarendon Road
London N22 6UL
Tel: 01-888 2231

Drilling & Site Investigation Contractors
Contract Drilling Ltd.
P O Box 30
Newmarket
Suffolk CB8 0AG
Tel: Newmarket (0638) 68779
Seacore Ltd.
Lower Quay
Gweek
Helston
Cornwall TR12 6UD
Tel: 032622 250/394
Telex: 45622

Drillers — Directional Drillers
Eastman Whipstock (UK) Ltd.
399 Saint Margarets Road
Twickenham Middx
Tel: 01-892 8832
Telex: 934450

Drop Forgers & Stampers
Thomas Smith & Sons of Saltley Ltd.
Gorsey Lane
Coleshill
Birmingham B46 1JF
Tel: 0675 63777
Telex: 338383

Drop Forgings Mnfs
Hughes-Johnson Stampings Ltd.
Langley Green
Oldbury
Warley
West Midlands B69 4TJ
Tel: 021-552 1361
Telex: 336581

Ductwork & Installation Mnfs
Brookway Engineers Ltd.
Birchanger Industrial Estate
Stansted Road
Bishops Stortford
Herts CM23 2TH
Tel: 0279 57971/4
Telex: 817764

Dumping Trailers/Steel Fabricators
Custom Steel Ltd.
20 Mayday Road
Thornton Heath
Surrey CR4 7HL
Tel: 01-689 4336
Telex: 922488

Dust Control Specialists
Dust Control (Scotland) Ltd.
Seaforth Road (South)
Glasgow G52 4XA
Tel: 041-882 3518

E

Earth Moving Equipment
Smalley Excavators
Osbournby Sleaford
Lincs NG34 0DJ
Tel: 05295 391
Telex: 37247

Education Equipment & Supplies
Wilson & Garden Ltd.
Tel: 0236 823291

Educational Technology
The Lucas Institute for Engineering Production
Residential Executive Short Course Centre
48 Edgbaston Park Road
Birmingham B15 2RA
Tel: 021-455 0921

Electrical Connector Mnfs
Hypertac Connectors
(A part of Smiths Industries)
Chronos Works
North Circular Road
London NW2 7JT
Tel: 01-452 3333
Telex: 928761

Electrical Contractors
Beverton Electrical Co. Ltd.
104-106 Churchfield Road
Acton London W3
Tel: 01-999 0744/5
Clark & Bridle Group
Advance Works
Woodcote Side
Epsom Surrey
Tel: Epsom 40422
T Clarke & Co. Ltd.
Tel: 01-733 5656
Kearsnacrest (Cardiff) Ltd.
ECA
Rear of 5 Railway Terrace
Penarth
South Glamorgan
Tel: 0222 700736
(568024/67803 After hours)
R T & N Electrical
Sam Chapman Buildings
Fish Dock Road
Grimsby
Tel: Grimsby 48104/43699 (night)

Electrical Control Gears Manufacturers
Metzenauer & Jung Ltd.
7-9 Oldfields Road
Sutton
Surrey SM1 2NB
Tel: 01-644 4571/2
Telex: 8952456 MEIZEN G

Electrical & Electronic Equipment Manufacturers
N L Electrical Ltd.
Tel: 0707 58288

Electrical Leads — Preparation & Marketing
Holden Cords Ltd.
32/36 Bowater Road
London SE18 5TF
Tel: 01-855 9821 (4 lines)
Telex: 291369

Electronic Automation Equipment Suppliers
Satt Electronics UK Ltd.
Unit E
13 Holder Road
Aldershot GU12 4RH
Tel: 0252 331661
Telex: 858200 SATT UK

Electronic Component Dist
Swift-Sasco Ltd.
Tel: Crawley (0293) 28700

Electronic Component Importers
Purchasing Enterprises Ltd.
Orion Parade
Keymer Road
Hassocks Sussex
Tel: 079 18 5411
Telex: 877358 PELTD G

Electronic Components
Celdis Ltd.
37 Lovelock Road
Reading RG3 1ED
Tel: Reading (0734) 585171
Telex: 848370
Prassac Ltd.
Acton Grove
Long Eaton
Nottingham
Tel: 060 76 60141
Telex: 37381

Electronic Control Systems
Lobic (Electrical Controls) Ltd.
Tel: Sunderland (0783) 43280

Electronic Prototype Production Engineers
Dortrell Ltd.
High Street
Bordon
Hampshire GU35 0AN
Tel: 04203 4185/5259

Electronic Sub-Contract Assembly Capacity
Shanoc Holdings Ltd.
Tel: Stevenage 727244

Electronics, Control Energy, Management Systems
Transmitton Ltd.
Smisby Road
Ashby-de-la-Zouch
Leicestershire LE6 5UG
Tel: 0530 415941
342284 (Mining Div)
344628 (Industrial & Energy Divs)

Energy Contracting Engineers
Bayliss Kenton Installations Ltd.
Harwood Street
Blackburn Lancs
Tel: 0254 60011
Telex: 63479

Engine Design/Agency & Consultants
Martin Engineering Co.
Southward House
Beaulieu Road
Dibden
Purlieu
Southampton SO4 5PT
Tel: 0703 845543
Telex: 47288 Chacom G

Engineered Component Manufacturing Specialists
Cego (Engineering) Ltd.
Western Road
Silver End
Witham
Essex CM8 3QB
Tel: 0376 83241
Telex: 987425

Engineering & Construction — Internationally
Davy Corporation Ltd.
15 Portland place
London W1A 4DD
Tel: 01-637 2821
Telex: 22604

Engineering — Precision
Ajax of Coventry Ltd.
Brandon Road
Binley
Coventry CV3 2AN
Tel: 0203 453505

Engineers/Aircraft Ground Re-Oiling Equipment
W & J Risbridger Ltd.
Stychen's Lane
Bletchingley
Redhill
Surrey RH1 4LN
Tel: 083 284 3107

Engineers/Consultants — Paper/Process Industries
Whitefield Systems (Holdings)
Kirklees Works
Garside Hey Road
off Brandlesholme Road
Bury
BL8 4LR
Tel: 030 458 6391
Telex: 635653

Engraving & Key Cutting Services
Classic
Tel: Maidstone (0622) 55569

Estate Agents, Auctioneers & Surveyors
Bradley & Vaughan FRICS
52 Perrymount Road
Haywards Heath
Sussex
Tel: Haywards Heath 52961
Telex: 87650
Henry Butcher and Co.
Brownlow House
50-51 High Holborn
London WC1V 6EG
Tel: 01-405 8411
Telex: 897377

Estate Development Specialists
E Clarke (Homes) Ltd.
Brighton Road
Addlestone
Weybridge
Surrey KT15 1PU
Tel: 0932 49113

Estate Surveyors, Insurance & Mortgage
Adrew Kent & Partners
97 Northcote Road
London SW11
Tel: 01-223 0347/673 5691

Excavation & General Building Specialists
S D Jordan
9 Lewis Road
Emsworth
Hants
Tel: Emsworth 6121

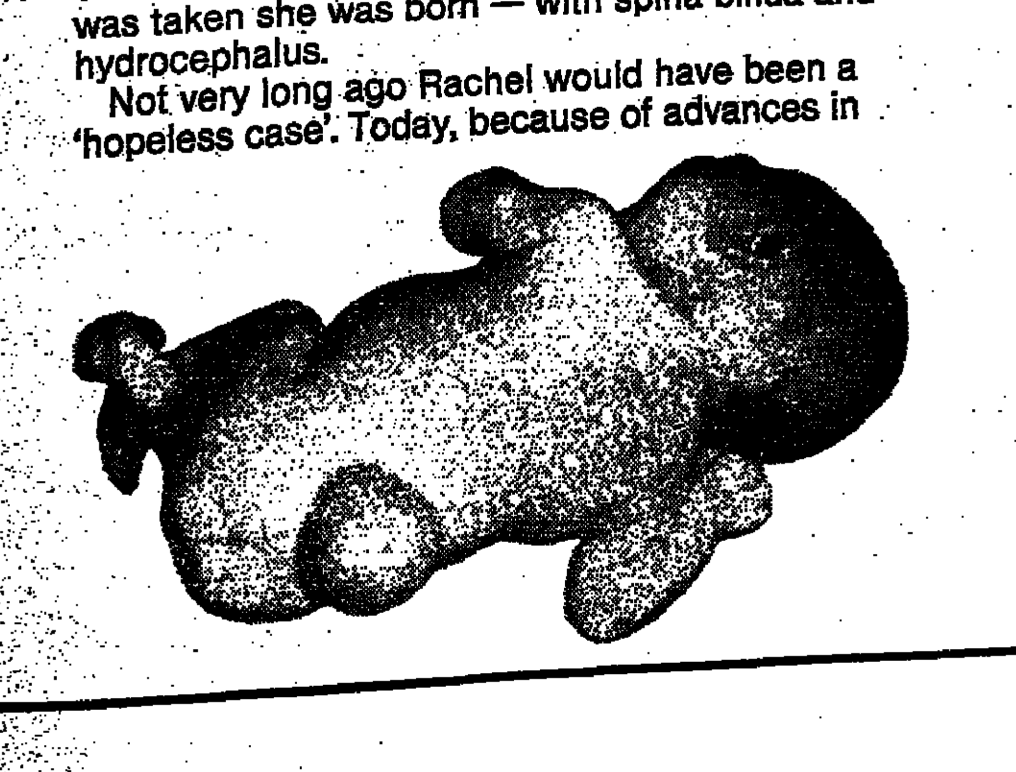
Exclusive Men's Wear
Lord John

Executive Search
Sabre International Search
15 Jermyn Street
London W1
Tel: 01-898 5135

Export
Garnerchart Ltd.
90 Western Road
Hove Sussex
Tel: 0273 725803

Export/Building Materials
Skybridge Export Ltd.
23 Fussell Street
Reading
Tel: Reading (0734) 596722
Telex: 849478

Happy Birthday?



This is Rachel. A few hours before this picture was taken she was born — with spina bifida and hydrocephalus.

Not very long ago Rachel would have been a 'hopeless case'. Today, because of advances in medicine and surgery, she has a chance of life — the possibility of growing up with her family and friends, of making her own contribution to society.

But to live her life to the fullest Rachel will always need help. Inevitably she will be paralysed to some extent. She will need constant medical attention to keep hydrocephalus (literally 'water on the brain') under control; special shoes, calipers, walking aids, perhaps a wheelchair, expert training to overcome her disabilities as much as possible, constant encouragement to take her place in the community. Her parents and family may need help, too.

ASBAH — the only organisation in the UK exclusively concerned with helping children born with spina bifida and/or hydrocephalus — works and cares for Rachel and all those born with these disabling conditions.

Many thousands of children and young people depend on ASBAH. ASBAH depends on you. ASBAH is a registered charity and without your help our work would cease. Our needs are greater than ever before because of inflation and cuts in social services. Please be as generous as you possibly can.

To ASBAH, Tavistock House North, Tavistock Square, London WC1 9HJ

I enclose my donation of .... to help ASBAH care for all those with spina bifida and hydrocephalus.

☐ Tick box if receipt is required.

Name.......................................

Address....................................

FT1

ASBAH
Association for Spina Bifida and Hydrocephalus.

Export Confirming House
Boilman & Lahrsen (London) Ltd.
22/24 Great North Road
Alconbury Weston
Huntingdon
Tel: 0480 890248
Export Packing & Storage
Accrington Packing and Storage Ltd.
Tel: Accrington 385011/4
Lloyd's Packing Warehouses Ltd.
Paston Road
Sharston Industrial Estate
Manchester M22 4TF
Tel: 061-902 9911
Telex: 668586
R & R Park Ltd.
Dominion Works
Thames Road
London W4 3RF
Tel: 01-994 7761
Telex: 916211
Smith Packaging
Grangeness Works
Grangemouth Road
Boness
West Lothian EH51 0PX
Tel: 050 682 2226
Extrusions — PVC, ABS (Rigid & Flexible)
Rotamould Ltd.
145 Frimley Road
Camberley
Surrey GU15 2PT
Tel: Camberley 63161/2/3

F

Farm & Forestry Safety
Salisbury Speciality Sales
Tel: 04536 79714
Fastenings, Bearings & Tools (Industrial)
M B S Glynwed Distribution
Humpage Road
Bordesley Green
Birmingham B9 5HP
Tel: 021-773 1222
Telex: 338768
Feed Milling & Materials Handling Engineers
Milltech Ltd.
Stockholm Road
Sutton Fields Industrial Estate
Hull HU8 0XL
Tel: 0482 825119
Telex: 52525
Fiat/Magirus Trucks, Sales & Service
Trucks Morley Ltd.
Victoria Garages
Wakefield Road (A650)
Morley
Leeds LS27 0SF
Tel: Leeds 534921
Telex: 556407 Car Mor
Fibreglass Guttering/Sheeting Manufacturers
Hambleside Manufacturing Ltd.
Unit G
Moorside Road
Winnall Industrial Estate
Winchester SO23 7RX
Tel: Sales: 0962 68332/
Factory 06676 2369
Telex: 477257 HAMBLE G
Fibreglass Hardtops for Pickup Trucks
Staverton Laminates Ltd.
Canal Side Works
Napton Industrial Estate
Napton
Nr Rugby Wars
Tel: 092681 3595
Film Productions, Printing & Processing
Film & Photo Design (West London) Ltd.
94a Kew Road
Richmond surey
Tel: 01-948 4542
Telex: 8814136 MECCO
Finance Consultants (Personal Friendly Service)
Cotswold Finance Consultants
Tel: Northampton (0604) 28674
Finance, Insurance & Mortgages
Brook Lane Finance Co. Ltd.
'Brackenside'
6 Lewes Road
Forest Row
East Sussex
Tel: Forest Row (034 282) 3977/8/9
Telex: 95116
Fire Alarm Systems & Fire Prevention
Fireshield Cymru Ltd.
Tel: Bala (0678) 520050
Fire Escapes/General Fabricators
Cromwell of Reading
1 Cardigan Road
Reading Berks
Tel: 0734 62125
Fire Protection Engs
Natalarms Systems Ltd.
Tel: 0622 76461
Floor Covering Manufacturers — Anti-Static
Marvillin Ltd.
Duke Street
Bedford MK40 3HR
Tel: 0234 214155/216291
Telex: 825619
Flooring Contractors
B T Busby (Flooring) Ltd.
Tel: Hinckley (0455) 637240
E J Elgood Ltd.
Tel: 01-237 1144
Allan Kennedy
Riverside
Stockton-on-Tees
Cleveland TS18 1TQ
Tel: 0642 65454
Flooring Contractors/All Soft Flooring
Jefferson Flooring Contractors
34 Yarningale Road
Kings Heath Birmingham
Tel: 021-444 5439
Flooring — Safety Systems
Addagrip Safety Floors UK Ltd.
Green Pastures
Sharps Bridge Piltdown
Uckfield East Sussex TN22 3XG
Tel: 0825 722146
Altro Ltd.
Caxton Hill
Hertford SG13 7NB
Tel: 0992 54212
Telex: 81444
Flooring Specialists — Hard Floors, All Carpets
P & B Flooring Ltd.
Unit 1
Guiness Close
Newmarket
Tel: 0638 3780/3736
Flooring Supplies & Contractors
Zanetti & Bailey Ltd.
110 Ashley Down Road
Bristol BS7 9JR
Tel: 0272 45079
Telex: 449700 ZEDBEE G
Flooring & Suspended Ceiling Contractors
Newlife Contracts Ltd.
Tel: 0632 774525/774622
Fluid Power Accessories
U C C International Ltd.
Tel: Thetford (0842) 4251
Fluorescent Light Fitting Manufacturers
Alex Engineering Co. Ltd.
Longmead Industrial Estate
Shaftesbury
Dorset SP7 8PL
Tel: Shaftesbury 4221/2/3/4

Flying Training/Aircraft Servicing
Bournemouth Flying Club
Tel: Northbourne (02016) 78558
Food Manufacturers

Wander Ltd.
Ovaltine Works
Station Road
Kings Langley
Hertfordshire WD4 8LJ
Tel: 092 77 66122
Telex: 922747
Makers of "Ovaltine" and other top quality beverages; malt extract suppliers to the food industry.

Forge Masters
Thos C Hurdley & Co. Ltd.
Baltic Works
Effingham Road
Sheffield S9 3JD
Tel: 0742 442056
Telex: 54626
Forgings/Aluminium/Titanium/Other Alloys
High Duty Alloys Forgings Ltd.
Windsor Road
Redditch
Worcester B97 6EF
Tel: 0527 64211
Fork, Industrial Truck, Crane Instructors
Train-a-Lift Ltd.
131 Erithway Road
Finham
Coventry CV3 6JS
Tel: 0203 416674/462027
Forklift Truck Mnfs
Montgomerie Reid Ltd.
Tel: Basingstoke (0256) 831444
Fork Lift Trucks — Electric

Atlet Ltd.
Jefferson Way
Thame Industrial Estate
Thame
Oxon OX9 3SP
Tel: Thame (084 421) 5501
Telex: 837112
Experts in Internal Materials Handling

Forklift Trucks — Industrial
Vernons Plant
Gores Road
Kirkby Industrial Estate
Liverpool L33 7XT
Tel: 051-546 4441
Forktruck/Crane etc. Courses
Morgan Associates
Tel: Coventry 467456
Framed Fine Art Reproductions
J B Arts Ltd.
60 Beaconsfield Road
London N11 3AE
Tel: 01-361 0911/2
Freight Agents (UK & Continent)
Waller Transport Services
100 Hythe Hill
Colchester CO1 2NP
Tel: 0206 49266 (Colchester)
0473 54717 (Ipswich)
Telex: 987306
Freight Forwarders/Packaging/Warehousing
All Transport International Group Ltd.
Walton House
Central Trading Estate
Staines Middx
Tel: Staines 51341
Telex: 935330
Bannon & Ward Ltd.
Railway Street
Dewsbury WF12 8EQ
Tel: Dewsbury 465241
Telex: 557935
Baxter Hoare Shipping Ltd.
18 Park Street
London SE1 9EW
Tel: 01-407 4455
Telex: 887559
Freight Co. Ltd.
Unit No 6
Dalsholm Industrial Estate
Dalsholm Road
Glasgow G20 0TB
Tel: 041-946 4675/4795
Halmac Freight Ltd.
18 Station Approach
Virginia Water
Surrey
Tel: Wentworth 2925
Telex: 847924
Ivey International Freight Services Ltd.
Tel: 01-897 2271
Rapat Freight Ltd.
Wilkin House
38a Staines Road
East Bedfont
Staines Middx
Tel: 01-751 6167
Telex: 8953732
Fuel Oil Distributors
Linton Fuel Oils
Tel: 01-385 6729
Fund Raisers to British Charities
Webb Ivory Ltd.
Queensbridge Works
Queen Street
Burton-on-Trent
Tel: 0283 66311
Telex: 341138
Furnace Builders
Karrena Tattersall & Watson Ltd.
Unit 2
Boathouse Lane
Stockton-on-Tees
Cleveland TS18 3AW
Tel: Stockton-on-Tees 605111
Telex: 587559 MID G
Furnace Mnfs — Electric
Carbolite Furnaces Ltd.
Bamford Mill
Bamford
Sheffield S30 2AU
Tel: Hope Valley (0433) 51551
Telex: 54524
Furniture Design Showroom
Aram Designs Ltd.
3 Kean Street
Covent Garden
London WC2
Tel: 01-240 3933
Telex: 8954432

G

Galvanising
Joseph Ash & Son Ltd.
P O Box 16
Charles Henry Street
Birmingham 12
Tel: 021-622 4661
Telex: 337978 GALTAN
Garment Manufacturers
M R Fashions Ltd.
8a Boundary Road
London E17 8JU
Tel: 01-521 4033
Garment & Small Component Handling Engineers
F T Engineering Ltd.
65 High Street
Frimley
Surrey
GU16 5HJ
Tel: 0276 62044
Telex: 858702
Gas Controls & Systems
Kromschroder (UK) Ltd.
163 Sutton Road
Kidderminster
Worcs DY11 6QN
Tel: Kidderminster 69778
Telex: 339739

Gear Manufacturers
Medway Gear Co Ltd.
30 Second Avenue
Chatham Kent
Tel: Medway (0634) 41407
Robert Pringle (Engineers) Ltd.
36-42 Clerkenwell Road
London EC1M 5PS
Tel: 01-253 6292
Generator & Water Pump Manufacturers
Atalanta Engineering Ltd.
Hanworth Trading Estate
Hanworth Lane
Chertsey Surrey
Tel: 09328 62655
Telex: 8812538 ATAL ANG
Generators & Portable Traffic Signals
R T D Swan Ltd.
Swan Close Road
Banbury
Oxon OX16 8AM
Tel: 0295 3494
Telex: 83426 SWAN G
Geophysical Equipment Supplies
Kalamos Co. Ltd.
2a Southend Road
Beckenham Kent
Tel: 01-658 3665
Telex: 946123
Glass & Windows
Quality Glass Ltd.
Leek New Road
Cobridge
Stoke-on-Trent ST6 2JY
Tel: Stoke-on-Trent 266321
Grain Dryers/Type Cimbria
Seed & Cereal Services (York) Ltd.
Cimbra House
52 Front Street
Acomb York YO2 3BX
Tel: 0904 794292
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Tel: Dartford 24362
Plastic Moulders
Plastics (Wednesbury) Ltd.
Plaswed House
Bright Street
Kings Hill
Wednesbury
West Midlands
Tel: 021-526 2962
Telex: 335051 PLAWED G
Plastic Pipes — Domestic Hot/Cold Supply
Hunter Plastic Industries Ltd.
Woolwich Industrial Estate
Nathan Way
London SE18 0AE
Tel: 01-855 9861
Telex: 25770
Plastic Welding — Binders, Wallets etc.
P V C Welding (Leicester) Ltd.
44/45 Faircharm Industrial Estate
Evelyn Drive
Leicester
LE3 2BU
Tel: Leicester 824100
Plastics — Injection & Compression Moulders
High Heat Plastic Mouldings Ltd.
Units 27-28
Morses Lane Industrial Estate
Brightlingsea
Essex
Tel: Brightlingsea 4146
Plastics — Injection Moulders
Teron Products
Tel: Maldon (Essex) 784260
Plastics Machinery (Used)
Plasplant Machinery Ltd.
Bordon Trading Estate
Oakhanger Lane
Bordon
Hants
GU35 9HH
Tel: Bordon (04203) 3013
Plastics — Mould & Tool Makers
Micro Injection Moulding Co. Ltd.
Tel: Chelmsford 71991
Plastics — Vacuum Forming
Manplas Ltd.
Meadow Mill
Water Street
Stockport
Cheshire
SK1 2BU
Tel: 061-477 1780
Platemakers — Trade
Offset Plate Services
40 Brathway Road
Wandsworth
London SW18 4BB
Tel: 01-870 7741
Plumbing & Heating
C & S Plumbing and Heating Engineers
16 Boyd Avenue
Dereham
Norfolk
Tel: Dereham 4475/Eve: 66244
J Lammond & Son
Tel: Brechin (03562) 2872
Polythene Bags for all Purposes
Global Trading (England) Ltd.
27 Maddox Street
London W1 0NA
Tel: 01-629 8807
Telex: 21421

Polythene Manufacturers
Rutland Polythene Ltd.
Wentworth Street
Ilkeston
Derby DE7 5TF
Tel: 0602 302026/302836
Evenings: 0332 764167
Telex: 378162 MACRUT
Polythene & Packaging Materials
Youngsley Ltd.
R/o 590 Lea Bridge Road
London E10 7DN
Tel: 01-556 1331
Telex: 223483
Poster Printers (Large)
St Michaels Press Ltd.
Tel: 01-670 7551/0137
Potato Handling Equipment Manufacturers
E J Tong & Sons (Engineering) Ltd.
Tel: 0790 52771
Poulan. Tondu. Mass Power Equipment
Chain Saw Products Ltd.
Tel: 061-834 9385
Power Generation Mnfs
Babcock Power Ltd.
165 Great Dover Street
London SE1 4YB
Tel: 01-407 8383
Telex: 964151/2/3
Power Press Mnfs
E W Bliss (England) Ltd.
City Road
Derby
Tel: 0332 45501
Telex: 377593
Pre-Cast Concrete Specialists
The Walsh Pool Concrete & Construction Co.
Tel: 0970 3475
Precision Engineers/Fabricators
Crotall Engineering Co. Ltd.
117a Bartholomew Street
Newbury RG14 5DT
Tel: Newbury 40112
Telex: 848507
Dicol Precision Engineering Co. Ltd.
95a Old Road
Clacton-on-Sea
Essex CO15 1HW
Tel: 0255 26025
W K W Precision Engineering Co.
Tel: Halifax (0422) 51720
Wavern Engineering Co. Ltd.
Savoy Works
Pershore Road Cotteridge
Birmingham B30 3DS
Tel: 021-458 6326
Telex: 335517
Wire Products & Machine Design Group Ltd.
26 Bridge Road
Haywards Heath
West Sussex RH16 1TY
Tel: 0444 53161
Telex: 87334
Precision Rebuilding of Grinding Machines
S O S Engineering
1-3 Industrial Estate
Ryhall Road
Stamford Lincs PE9 1XW
Tel: Stamford 52081
Telex: 32444 (SOSENG) G
Precision Surface Engineers
Engis Ltd.
Parkwood Trading Estate
Maidstone ME15 9NJ
Tel: 0622 55287/0 and 56695/8
Telex: 96231 ENGIS G
Press Automation Equipment Manufacturers
Bruderer (UK) Ltd.
Skimpot Road
Dunstable LU5 4JG
Tel: 0582 56167
Telex: 825728
Press Tools & Punches
Clews Bros.
Hall Lane
Walsall Wood
Walsall WS9 9BB
Tel: 05433 3678/9
Telex: 336176
Pressure Control Equip
Cameron Iron Works Ltd.
Houston Road
Livingstone
West Lothian EH54 5BZ
Tel: 0589 31122
Pressure Regulators & Water Governors
Dereve (Flow Control) Ltd.
Unit 1
Twydale Works
Dudley Road West
Tividale Warley
West Midlands B69 2 PF
Tel: 021-520 1337
Presswork — General.

Reliance Sheet Metal
Mile Lane
Coventry
Tel: 0203 28316/569459
Press Work, Sheet Metal Work, Tube Manipulation, Galvanising.

Presswork — Sub-Contract
High Speed Production (Surrey) Ltd.
Mill Street
Kingston-on-Thames
Surrey KT1 2RG
Tel: 01-549 3401
Printed Circuit Board Mnfs
Fouray Electronics Ltd.
Tel: St Albans 59515
Gibb Printed Circuits Ltd.
Tel: Worthing (0903) 35505
Stevenage Circuits Ltd.
Leyden Road
Stevenage Herts
Tel: 0438 54328
Printed Circuits & Electronics Manufacturers
Photo Etch Ltd.
Tel: Penzance 4472
Print Trade Finishing
Steel Rule Dies Ltd.
Ring Road House
380 Nottingham Road
New Basford
Nottingham NG7 7FF
Tel: 0602 708712/2
Printers/Converters of Polythene & Polythane Packaging
Polyien Ltd.
Unit 13-23a Grainger Road
Industrial Estate
Southend-on-Sea
Tel: 0702 68976/67273
Printers & Lithographers
A B C Printers
153 Praed Street
London W2
Tel: 01-723 0235
Colonnepress Ltd.
Paradise Industrial Area
Hemel Hempstead
Hertfordshire HP2 4TH
Tel: Hemel Hempstead 64677/8
Cullum Litho Ltd.
11 Northburgh Street
London EC1
Tel: 01-251 4805
D E C Litho Ltd.
Units 31 & 35 Swaislands Drive
Crayford Industrial Estate
Crayford Kent
Tel: Crayford 529587
D W Services
Tel: 01-980 0143
Richard Davis Ltd.
248 Fulham Road
London SW10
Tel: 01-352 7787

TECHNOLOGY
EDITED BY ALAN CANE

U.S. electronic mail set for attack on Europe

BY ALAN CANE

WHAT HAVE Westinghouse, Citibank, the U.S. Department of Energy and Bethlehem Steel in common? They all use electronic mail services provided by a small, comparatively little known U.S. computer bureau called Dialcom.

Now this U.S.$6m company, which reckons to hold some 30 per cent of the U.S. market for electronic mail services is establishing itself in the UK.

It is negotiating with a number of potential partners in this country with a view to a joint attack on the European market.

Electronic mail is usually seen as a cornerstone of the "electronic office." It simply means ways of communicating electronically between organisations and between individuals within organisations.

It would mean, for example, that an executive would enter his office in the morning, switch on his electronic desk (screen, keyboard, telephone, all in one unit) and be presented with a list of all the messages that had arrived for him.

He would be able to send messages, check his diary, gather information and process it, all from the desk.

Technically, all of this is possible now; how best to design and build such systems is open to argument.

The Xerox Ethernet system, for example, uses simple coaxial cables to carry messages to and from workstations, printers, electronic filing cabinets and all the rest of the equipment that makes up the electronic office.

The computer power, the intelligence to power the system, resides in devices themselves.

Dialcom takes exactly the opposite approach. It uses whatever proprietary terminals, printers and visual display units are best suited to its cilent's business and provides the intelligence to run the system from its battery of Prime minicomputers in Silver Spring, Maryland.

So just as typing can be sent out to a word processing bureau, and copying to a copy bureau, Dialcom offers electronic mail on a bureau basis.


BOB RYAN, a founder and now president of Dialcom pictured in the London offices of SRI

According to Mr Bob Ryan, a founder and now president of Dialcom, the aim is not to dispense with paper.

"We are not looking for the paperless office. We do not expect, for example, to see newspaper replaced by electronic news retrieval. But we are trying to enhance communication between people — especially over long distances where differing time zones make business communication difficult."

The chief offering is electronic mail, but the company is building news facilities onto this base.

It offers, for example, an executive scheduling service, correspondence management and information management.

And, through the use of "gateway" software, it offers access to information held on other computer systems. This makes it possible for subscribers to have access to UPI, AP and Reuters computerised news services.

Dialcom is a packet-switched service. That is, its electronic messages are divided up into small packets of data, despatched onto the network in which they are delivered to the recipient address in the most economical and effective way.

Dialcom, when it becomes established in the UK in January 1982 is expected to become a heavy user of the British Telecom packet switched services IPSS and PSS.

In the U.S., the company has some 30,00 individual "mailboxes" in the field, Westinghouse, with 1,200 of those mailboxes, uses the system to send messages between executives. The congressional offices have some 2,000 mailboxes and Congressman Jim Coyne is seeking legislation to allow constituents to lobby their representative electronically using their home computers.

There is nothing technologically breathtaking in what Dialcom and its chief competitors, Telemail and Comet, are doing. What it has done is to see the possibilities in applying computer bureau techniques to a developing need. Costs for the user in the U.S. are between US$ 8 and US$ 13 an hour.

The average user seems to use the system for sending messages for between 15 and 20 minutes a day.

Barclays' energy saver

ENERGY conservation in the heart of the City of London may cause a few raised eyebrows in the industrial Midlands and the North, but it is clearly as valid an enterprise here as anywhere else in the country.

So it should surprise no one that Barclays is going along with the other Big Four clearing banks, notably National Westminster in its famous tower block, in installing an automated engineering services monitoring system that will save labour and materials as well as energy.

At its head office in Lombard Street, Barclays is to instal a Johnson Controls JC/80/55 system with, as its central feature, a minicomputer with 128K of memory and a fixed-head disc having a capacity of 1 Meg.

Twisted cables

The system incorporates multi-drop distributive processing techniques using twisted cables as the communications media and can also be used over voice-grade telephone lines to other buildings if required.

Microprocessors used in the field units are designed to ensure that all information is made available rapidly so that remedial action can be taken without delay.

The energy savings will be in the most efficient use of lighting, lift operation, heating and air conditioning, and other services. Information will be presented to the bank's service engineers on a colour cathode ray tube and colour graphics will be available to provide dynamic system information. The whole system will be capable of monitoring about 700 points and has 29 field processing units.

When the initial installation in Lombard Street is complete Barclays will consider whether to extend the system to some of its other bank buildings. More from 0793 26141.

Spray etching eases printed circuit costs

SIGNIFICANT COST savings in the manufacture of printed circuit boards are claimed for a new spray etching process introduced by Electrochemicals. Named Cyclo-Spray, it is a continuous final process designed to provide rapid etching suitable for all sizes of production equipment. It is the only hydrogen peroxide / sulphuric etchant that can be used in conventional spray-etching equipment, says Electrochemicals.

Continuous operation is achieved by cycling the etching solution through a simple closed-loop copper recovery/regeneration system and up to 95 per cent of the etched copper is said to be recovered as copper pentahydrate or electrolytic metallic copper.

An important advantage is that the solution is completely stable and can be used indefinitely, eliminating the cost of spent etchant disposal and permitting 100 per cent utilisation of the etching chemicals.

The Cyclo-Spray replenisher is a hydrogen peroxide formulation containing the correct amounts of stabiliser and inhibitor to maintain an efficient etching process, it is claimed. The stabiliser is consumed at the same rate as the hydrogen peroxide, thereby eliminating imbalance.

A major advantage claimed for Cyclo-Spray is when used with tin/lead solder-plated resists there is no need for solder-brightening chemicals after etching. This can reduce the total chemical etching cost by up to 50 per cent.

The process is said to produce no unpleasant fumes and no by-product waste. Electrochemicals is on 0203 62536.

Swiss microscope in 3D

SWISS instrument makers, Wild Heerbrugg, have developed a three-dimensional microscope. Three interchangeable binocular tubes enable the microscope to be used at different angles and heights. An optional wedge-shaped tube adaptor can displace the tubes by 15 degrees up or down. Wild Heerbrugg claims that the development does away with problems for spectacle wearers in the use of a microscope. The horizontal distance of the two eye tubes is continuously adjustable to the inter-pupillar distance of the viewer and defective vision can be corrected for each eye within plus or minus five diopters.

Computer memory devices

THE first two of a new series of computer memory interface devices, including advanced dynamic RAM controller/drivers, error detection and correction circuits and other memory support devices, are now available from the National Semiconductor Corporation.

The DP8408 dynamic RAM controller / driver and the DP8409 multi-code dynamic RAM controller/driver devices are claimed to offer a one-chip solution to the problem of simplifying dynamic memory system design from microprocessors to large memory systems. More from 0234 47147.

Readout for secretaries

BEFORE LISTENING to a single word recorded on a tape, a secretary can see from a computer readout the exact number of documents recorded over a given period, how long they are, who made the recording, and how urgent it is.

This is the special pride of a new microprocessor controlled dictating system called the Super-Vision III which Lanier is to debut, along with three other new products, at the International Business Show, at the NEC next October 20-29.

New to the company's range are the VPA (a microprocessor based pocket dictation machine with a simple one-button control for all operations) and its desk companion, the OMNI Q.

Both machines use electronic cueing, where alterations and amendments to documents already recorded can be fed on to the tape and coded by a cue tone. On replay, the machine will first seek out the cue tone and replay all the alterations before the text of the dictated documents.

Fourth new product is the Time Commander, described as a top-of-the-range desk top dictation machine with touch sensitive controls, electronic cueing, and end of letter instructions, a control to inform a secretary how many items of dictation are on tape, and the length of each piece.

More on 01-549 8741.

Decade counter

GUARANTEED to operate at input frequencies up to 1.5GHz, a decade counter introduced by Plessey Semiconductors has been developed as a prescaler for frequency counters. Its high performance extends the previous maximum input frequency for such circuits by 300 MHz and it has the advantage of being pin-compatible with earlier designs, Plessey claims.

A corresponding divide-by-eight circuit has also been introduced. Both devices have advanced ECL bipolar technology and are available in a 14-lead ceramic package. Details from 0793 694994.

Filtration

A CENTRIFUGAL filtration system designed to solve many problems considered too difficult for equipment using disposable filter media or magnetic attraction has been introduced by Filtration Service Engineering.

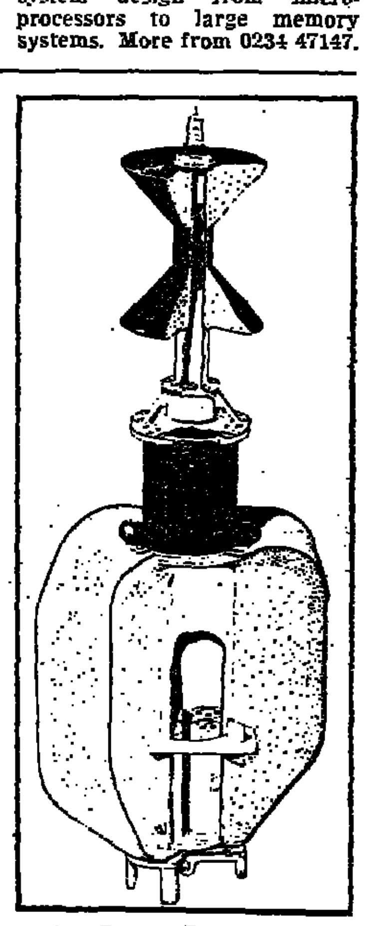
The liquid to be cleaned is passed through a cylindrical stainless steel bowl rotating at 3,000 rpm. By regulating the flow rate a force of up to 1,500 x gravity is induced in the contaminant particles, which are then deposited on the inner wall of the bowl. Particles as small a 5 micron (the size of a single grain of talcum powder) can be removed in this way, says FSE.

The viscosity of the liquid is not a critical factor, as in more conventional methods of filtration, which means that the centrifuge is suitable for cleaning oils. Because the contaminant is deposited in a consolidated form, such valuable materials as copper and carbide can be easily recovered. More from 0562 60233.

Epoxy putty

MANY do-it-yourself applications in homes, boats and cars can be facilitated by an epoxy putty introduced by Borden (UK), it is claimed. The latest addition to the Epophen range, it is supplied in two components, resin and hardener. These are mixed in equal amounts to give an easily moulded putty that hardens in a few hours.

The epoxide putty is claimed to give sound adhesion to wood, metal, concrete, ceramics and many plastics. It cures in the presence of moisture to give a durable surface which can be shaped with rasps or files, says Borden (UK). Details from 0704 732131.



Marker buoy

THIS deep-water marker buoy made by AGA Navigation Aids uses composite plastics foam for buoyancy. The core, around a metal cylinder housing the batteries, is of rigid closed-cell polyurethane, while the flexible coating is of expanded polyethylene resistant to impact. The unit is claimed to be more efficient than a metal buoy in terms of weight-to-chain carrying capacity and safer and cheaper to transport and handle. Flat-sides make for easy stowage on the deck of a service vessel. Buoys of this type are already afloat in the North Sea offshore oilfields.

LOMBARD

How unions could save Labour

BY JOHN LLOYD

THERE IS something of the cat and the mouse in the present relationship between the trade unions and the Labour Party.

The unions alone can save the party from its cash crisis.

But the unions are hard pressed themselves. They will not raise their annual affiliation fees for a dues paying member from 40p to 50p, as the Party has asked. Instead, the unions plan to raise a voluntary levy, and bring dues up to 45p.

Dependence

Because of the Party's overwhelming dependence on the unions, it is widely assumed that the unions will effectively decide who the Party's next general secretary will be (though the decision is the National Executive committee's, which they do not control). The unions are deciding on their candidate in a measured fashion.

They hold the ring between a probably *Healeyite* parliamentary party and a certainly Bennite constituency section in the contest for deputy leader. Much uncertainty surrounds this. The two major undecided unions — the Transport and General Workers and the General and Municipal Workers — may split for Benn and Healey, *may split for Silkin and Healey, may both go for Silkin* (which could even ensure his victory), or the TGWU may abstain (thus probably ensuring Healey's victory).

Most decisively of all, they are the dominant partner in Labour Party policy making through the medium of the TUC-Labour Party Liaison Committee. This reflects the relative weakness of a party enervated by two years of internal wrangling and the tardiness of a national executive in formulating effective policy in a number of crucial areas. By contrast, the TUC appears disciplined and self confident in what it wants.

The TUC has made it clear that it will not rest content with mere policy making in opposition. A future Labour Government will be required to build continuous consultation with the unions into its routine. One such mechanism suggested last month by Mr Len Murray, the TUC General Secretary, is TUC involvement in the annual public expenditure survey exercise.

However much of the unions' power in bargaining with employers and the present Government stands at a low ebb, their power for bargaining with a possible future Government has increased so greatly that they will, at top level at least, hardly be in a bargaining posture at all. They will *have* power.

And thus responsibility. For while a Labour Party in opposition can be swayed by, even at times controlled by, far left elements, the trade unions are constrained by their need for survival. This makes them pragmatic, consensual and ultimately representative. A trade union-dominated Labour Party could, in the first place, not be blamed by the unions for betraying them and second, would have a sharper instinct for the problems of the real world than it at present sometimes shows.

The TUC's assumption of this position within the Labour movement has been of much greater, though much less heralded, importance than the rise of the left within the Party, though of course the two developments are not in practice separable.

Sense

It is in this sense that politicians from the soft left rightwards speak when they talk of the unions being the last chance to "save" the Party. They do not say this in the 1950s sense, of the right-wing disciplinarians of the General Council lining up behind Gaitskell, in his struggle against the Bevanite left. They are talking in the new sense of the trade union leadership being, by the logic of the great strength it still commands, so drawn into the responsibilities of opposition and Government that it takes upon itself the task of dealing with the facts of British political and economic life, and of explaining them to its members. The politicians may well be right.

Still photography in East and West

WITHIN THREE days of Sony's announcement last week of the Mavica electro-magnetic still camera, I was—by sheer coincidence—looking at a system of still photography powered entirely by solar energy. It was publicly announced in 1839 by an Englishman, William Henry Fox Talbot, and was the world's first negative/positive method of photography (Daguerre's, announced with great Gallic flourish a few months earlier, did not allow negative/positive printing of copies).

My investigation last week took place during an idyllic day trip to the West Country, which by happy chance has provided three very different centres which anyone with an interest in photography should endeavour to visit.

The oldest, opened in 1975, is the Fox Talbot Museum—sited in a magnificent stone barn within the grounds of Lacock Abbey in Wiltshire. It was here that Fox Talbot lived and carried out much of his experimental work on photography.

Many of his early pictures, now a famous part of photographic history, are of the house and abbey—such as the open door in a courtyard with a birch *broom leaning against the wall;* and the ladder up to the stable loft (both published in Talbot's book, The Pencil of Nature, in 1844).

Apart from the sheer beauty of the abbey and the charming village of Lacock (surely one of England's prettiest) it is a strange experience to be able to stand in the courtyard and see the same stable loft and the same courtyard doorway (but the broom has gone!).

Whereas the nearby museum chronicles the story of Talbot's work, with both photographs and apparatus, the abbey allows the visitor to relive it.

On my own visit last week, as I entered the sun-baked courtyard, the strains of a solo violin carried through an open window from some distant room inside. For tourists, this is surely better than anything the Tower of London can provide.

Thirty minutes' drive away, in beautiful Bath of mellow stone, is the second centre of still photography which should draw the cognoscenti further westward. Here, in the magnificent 18th-century Octagon, right in the middle of Bath, the Royal Photographic Society has opened its new National Centre of Photography.

With a permanent display of equipment and prints, visitors can follow through the complete story of photography (which actually starts with an earlier Frenchman, Nicéphore Niépce). Contemporary exhibitions are a *changing feature of the Octagon,* and a 90-seater lecture theatre —not yet fully operational—will provide a venue for slide presentations.

Less than a further half-an-hour's drive into the setting sun is the newest project of the three, the Watershed in Bristol. Still in the hands of the builders, this is an imaginative conversion of Victorian warehouses on the quayside of this famous old port.

The main part of the conversion will provide Britain's first Media and Communications Centre—a complex where facilities for still photography, cinematography and video will be made available to the public. The centre will have darkrooms, editing equipment, cameras, two well-equipped auditoria (one seating 200 and both with 35 mm film projection as well as other gauges), exhibition areas, a restaurant and bar, and an even larger hall for 300 where lectures and big exhibitions can be staged.

This multi-media facility, where video, film and still photography will be completely integrated, has evolved out of the Bristol Arts Centre, which it will replace. Thankfully, however, it promises to avoid artiness by providing a thriving focal point for all manner of activities.

These include business conferences, shopping in a concourse alongside the water's edge and public screenings of films and other media programmes. Another part of the building houses Bristol's independent radio stations, which goes on the air later this year.

Watershed is a marvellous idea because it aims to remove many of the barriers—technical and emotional—which have traditionally inhibited a unified approach to the mass media. It also happens to provide Britain with a conference centre which, ironically, will be more versatile than any in London.

My rapid passage through the history of image recording—in the same week as Sony's announcement about electronic photography—has a double irony about it. Accompanying me was a senior executive from Kodak, a company which has contributed significantly to the Talbot Museum, the Octagon and Watershed.

And it was another Kodak executive (in the U.S.) who earlier this year had said of electronic photography: "We believe it will be at least into the next decade before an acceptable all-electronic still camera becomes available . . ."

It remains to be seen whether Sony's Mavica system will become available within two years, as promised, and indeed whether its quality will render it acceptable. But the Japanese have a habit of fulfilling expectations.

In the meanwhile, a report recently published on the future of professional photography already looks like coming true —despite some cynicism in the photographic press about its findings. Commissioned by the Printing and Publishing Industry Training Board, it is a brief summary of a preliminary inquiry into the effects of present and future technological developments on photography and the profession.

It was prepared by a committee of four people with very different backgrounds in the subject, and since I was one of them, I can hardly write objectively about it (the other three were a management consultant specialising in photography, a scientific photographer running a photographic unit in a major public company and the photographic manager of a national newspaper group).

None the less, it may suffice to say that our conclusions were a little gloomy. Not so much in regard to the photographic process, but because of the upheavals facing the traditional role of the professional working in photography.

Not only is the process of photography (and printing) becoming highly automated and computerised — diminishing the need for people and technical skill—but demand for the services of the professional photographer is, we believe, under attack.

Managers, engineers, sales reps, scientists, advertising managers are increasingly becoming their own photographers; and guests at local weddings now frequently upstage the local professional (if one is engaged) with the expensive cameras they use.

We believed that, faced with this situation, the only way the average professional photographer *could* meet this threat was by demonstrating unsurpassable creative use of the medium. And, sadly, we felt that the number of professional photographers in Britain who can rise to such heights of excellence is too few to comprise an industry.

Indeed, looking at some of the early phtographs in the Fox Talbot Museum, one seriously wonders how much creative progress photography has really made.

Perhaps it is the technology syndrome to blame, the reason why so many video programmes also seem pretentious compared with films. The image-makers are losing their sense of communion with the raw materials of the process.

Those who make the pilgrimage to Lacock or Bath will see for themselves the truth of that —enshrined in the stone of an unrepeatable era.

FILM AND VIDEO

BY JOHN CHITTOCK

Piggott may seek Epsom double

RACING

BY DOMINIC WIGAN

LESTER PIGGOTT is back today at Epsom—scene of his two most recent narrow escapes from serious injury — with bright prospects of pushing along his championship score.

The maestro, out of luck on Madam Gay at Arlington, but with two dozen winners to his credit in this country over the past fortnight or so, must be hopeful of lifting both the Rubbing House Stakes and the Chalk Lane Stakes.

For the first-named event, Ian Balding has secured him for the once-raced Dance Speel colt, Triple Axel, who must go well—judged on his recent effort in Newbury's Yattendon Stakes.

Despite looking extremely burly in the preliminaries on the Berkshire course compared to many among his 23 opponents, Triple Axel—a handsome and powerfully built bay—made his presence felt until below the distance from a bad draw.

That run will have brought Triple Axel on a good few pounds, and I shall be disappointed if he fails to give Piggott another winner in this event, which he took a year ago through Cavalry Twill. As was the case then, there are eight runners for the Rubbing House.

Michael Stoute, for whom Cavalry Twill did more than his fair share in helping to provide over a century of winners for Beech Hurst, has unexpectedly withdrawn Balanchine.

Redden, Piggott's Brian Swift-trained mount in the Chalk Lane Stakes, has already shown his appreciation for the course and must have bright prospects of improving his track record following a smart effort at Kempton.

EPSOM

2.00—Cabbage Man
2.30—Triple Axel***
3.05—Steel Charger
3.40—Redden**
4.10—Bunce Bey
4.45—Erotas

CHEPSTOW

2.15—Swift Kiss*
4.45—Prince Tempo

TV/Radio

† Indicates programme in black and white

BBC 1

6.40-7.55 am Open University (Ultra High Frequency only). 9.20 The Wombles. 9.25 Jackanory. 9.40 Sports All Rounder of the Year. 10.05 Take Hart. 10.25-12.35 pm Cricket: Sixth Test from The Oval. 1.12 Regional News for England (except London). 1.15 News. 1.30-1.45 Heads and Tails. 3.45 O dro I dro. 4.18 Regional News for England (except London). 4.20 Play School. 4.45 Tarzan, Lord of the Jungle. 5.05 John Craven's Newsround. 5.10 Animal Magic.

5.40 News.
5.55 Nationwide (London and South East only).
6.20 MacLeod in Japan.
6.45 Medical Express.
7.15 The Tuesday Film: "The Last Command" starring Sterling Hayden.
9.00 News.
9.25 Hypnosis and Healing.
10.35 Kelly Monteith.
11.05 Come Dancing.
11.50-11.55 News Headlines.

All Regions as BBC1 except as follows:

Cymru/Wales — 5.10-5.35 pm Bobol bach. 5.55-6.20 Wales Today. 6.45-7.15 Heddiw. 11.50 News Headlines, News and Weather for Wales.

Scotland—1.10-1.15 pm The Scottish News. 5.55-6.20 Reporting Scotland. 11.50 News Headlines, News and Weather for Scotland.

Northern Ireland—4.18-4.20 pm Northern Ireland News. 5.55-6.20 Scene Around Six. 11.50 News Headlines, News and Weather for Northern Ireland.

England—5.55-6.20 pm Look East (Norwich); Look North (Leeds); Look North (Newcastle); Look North West (Manchester); Midlands Today (Birmingham); Points West (Bristol); South Today (Southampton); Spotlight South West (Plymouth).

BBC 2

6.40-7.55 am Open University.
11.00 Play School.
1.05 pm Cricket: Sixth Test from the Oval.
6.05 Open University.
6.55 FACTS: Football Association Coaching—Tactics, Skills.
7.20 One Hundred Great Paintings.
7.30 News Summary.
7.35 My Music.
8.00 Masters of Modern Sculpture.
9.00 Burt Lancaster in "Valdez Is Coming."
10.30 Cantilena.
11.00 Newsnight.
11.45 Cricket: Sixth Test (*highlights*).

LONDON

9.30 am Steam Engines. 9.40 Friends of My Friends. 10.10 Hands. 10.35 Dick Tracy Cartoon. 10.40 Little House on the Prairie. 11.30 Freetime. 12.00 Paperplay. 12.10 pm Pipkins. 12.30 The Sullivans. 1.00 News, plus, FT Index. 1.20 Thames News. 1.30 About Britain. 2.00 Racing from Epsom. 3.50 Cabbages and Kings. 4.20 Get It Together. 4.45 The Extraordinary People Show. 5.15 Diff'rent Strokes.

5.45 News.
6.00 Thames News.
6.35 Crossroads.
7.00 Give Us a Clue.
7.30 Keep it in the Family.
8.00 The Morecambe and Wise Show.
8.30 The Flame Trees of Thika.
9.30 Frankie Howerd Strikes Again.
10.00 News.
10.30 Consett—After the Blast.
11.15 City of Angels.
12.15 am Close "Sit Up and Listen" with Terry Duffy.

All IBA Regions as London except at the following times:

ANGLIA

9.30 am Sesame Street. 10.30 Hands. 10.55 Cartoon Time. 11.05 The Adventures of Niko. 11.30 Portrait of a Village. 12.30 pm Gardening Today. 1.20 Anglia News. 5.15 Bygones. 6.00 About Anglia. 11.15 Anglia Late News. 11.20 The New Avengers. 12.30 am Themes.

ATV

9.25 am European Folk Tales. 9.40 Juggernaut. 10.05 Bailey's Bird. 10.30 The Further Adventures of Oliver Twist. 11.00 Sesame Street. 12.30 pm Gardening Today. 1.20 ATV News. 5.15 The World Free Style Dancin' Championship 1981 (ATV Regional final). 6.00 ATV News. 6.05 Crossroads. 6.30 ATV Today. 11.15 ATV News. 11.20 Beyond Westworld.

BORDER

9.30 am Sesame Street. 10.30 Sally and Jake. 10.45 Friends of Man. 11.10 Joe 90. 11.35 The New Fred and Barney Show. 1.20 pm Border News. 5.15 Welcome Back Kotter. 6.00 Lookaround Tuesday. 11.15 Hear Here. 11.30 Border News Summary.

CHANNEL

12.30 pm Gardening Today. 1.20 Channel Lunchtime News, What's On Where and Weather. 5.15 Happy Days. 6.00 Channel Report. 6.10 Spiderman. 10.28 Channel Late News. 11.15 Musical Special. 12.15 am Commentaires et Previsions Meteorologiques.

GRAMPIAN

9.40 am First Thing. 9.45 Wild Wild World of Animals. 10.10 Hands. 10.35 Sesame Street. 11.35 The Flying Kiwi. 12.30 pm Gardening Today. 1.20 North News. 5.15 The New Fred and Barney Show. 6.00 Summer At Six. 11.15 The Monte Carlo Show. 12.10 am North Headlines.

GRANADA

9.30 am Dick Tracy. 9.35 Target The Impossible. 10.00 Cartoon. 10.10 Children of the World. 10.35 Bailey's Bird. 11.00 Sesame Street. 1.20 pm Granada Reports. 3.45 The Spinners . . . And Holidays. 5.15 Mork and Mindy. 6.00 Granada Reports. 6.25 This Is Your Right. 11.15 Twist In The Tale.

HTV

10.05 am Isle of Wight Artisans. †10.30 "The Last of the Mohicans," starring Randolph Scott. 12.30 pm Gardening Today. 1.20 HTV News. 5.15 Sylvester. 5.20 Crossroads. 6.00 Report West. 6.30 Into the Labyrinth. 10.28 HTV News. 11.15 Police Surgeon.

HTV Cymru/Wales—As HTV West except: 12.00-12.10 pm Cwadi Cwac A'i Ffrindiau. 4.20-4.45 Camigem. 6.00 Y Dydd. 6.15-6.30 Report Wales. 10.30 *Ffilmiau Teledu*. 11.35-12.05 am Benson.

SCOTTISH

9.55 am The New Accelerators. 10.20 The Natural Environment. †10.35 The Golden Oldies: "Bank Holiday," starring Margaret Lockwood. 12.30 pm Gardening Today. 1.20 News Headlines and Road and Weather Report. 1.30 The Electric Theatre Show. 5.15 Teatime Tales. 5.20 Crossroads. 6.00 Scotland Today. 6.20 Job Spot. 6.30 What's Your Problem? 7.00 Alastair—One Man and His Band. 11.15 Late Call. 11.20 Adams of Eagle Lake.

SOUTHERN

9.35 am Making of a Crew. 10.00 Young Ramsay. 10.50 Alphabet: The Story of Writing. 11.15 Stingray. 11.45 How. 1.20 pm Southern News. 5.15 Dick Tracy Cartoon. 5.20 Crossroads. 6.00 Day By Day including Southsport. 11.15 The Engagement.

TYNE TEES

9.20 am The Good Word. 9.25 North-East News. 9.30 Morning Movie—"Inn Of The Sixth Happiness." 1.20 pm North-East News and Lookaround. 5.15 Survival. 6.00 North-East News. 6.02 Crossroads. 6.25 Northern Life. 11.15 Enterprise. 11.45 Family Business.

ULSTER

1.20 pm Lunchtime. 4.18 Ulster News. 5.15 Cartoon Time. 5.20 Crossroads. 6.00 Good Evening Ulster. 6.30 Square One. 10.29 Ulster Weather. 11.15 Bedtime.

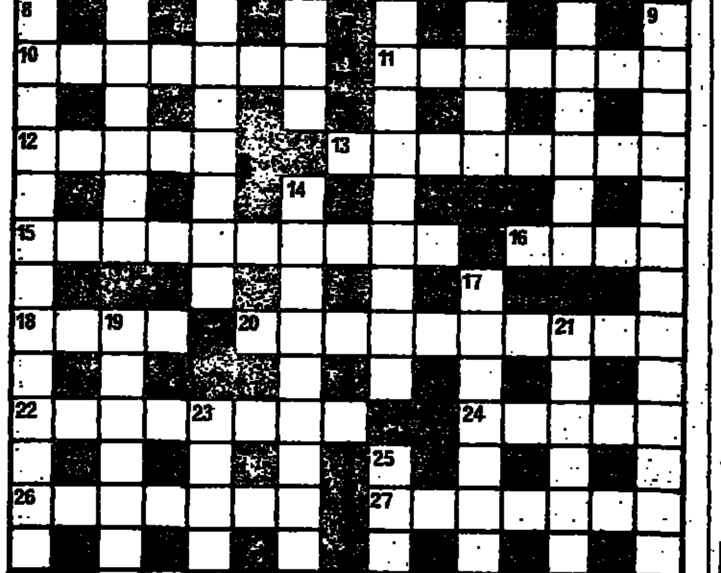
WESTWARD

9.40 am Untamed World. 10.05 George Hamilton IV. 10.30 Bailey's Bird. 10.55 Call It Macaroni. 11.15 Sally and Jake. 11.30 Out of Town. 11.55 Wattoo Wattoo. 12.27 pm Gus Honeybun's Birthdays. 12.30 Gardening Today. 1.20 Westward News Headlines. 5.15 Happy Days. 6.00 Westward Diary. 10.32 Westward Late News. 11.15 Musical Special. 12.15 am Faith for Life. 12.20 West Country Weather and Shipping Forecast.

YORKSHIRE

9.40 am Wild, Wild World of Animals. 10.05 The Beachcombers. 10.30 Animated Classics. 11.30 George Hamilton IV. 11.55 Wattoo Wattoo. 1.20 pm Calendar News. 3.50 Calendar Tuesday. 5.15 Bless Me, Father. 6.00 Calendar (Emley Moor and Belmont Editions). 11.15 Sounds of Summer. 11.45 Score.

F.T. CROSSWORD PUZZLE No. 4,660



ACROSS

1 Transport gas in conduit and implement (5, 7)
10 Difficult horse for riding, but it's painful for a dog (4, 3)
11 Part of the inner ear could make it cruel (7)
12 End of river, near the mouth, is dewy (5)
13 Coin from the East or from teacher (8)
15 Chamber used by ladies may be found on a ship (6-4)
16 Forage cap to be seen in lifelike picture (4)
18 Chief type of monument (4)
20 Watery vapour I put in barman's measure, being sanguine (10)
22 Ordered cut near top initially, and is now appearing squared off at the tip (8)
24 *Chopper going to the Isle of* Man—it's a self-evident truth (5)
26 When car runs into accountant it should be moving! (7)
27 One who arranges a marriage for mother outside church (7)
28 Marks of reference described in a state of hostility (7, 5)

DOWN

2 Ventilate sailors and fliers (7)
3 Communist, accepting a beating, drove off (8)
4 Trim cover for a chair-back (4)
5 Plump bird holding petition for many people (5, 5)
6 Curing-mixture, without direction, could be from the Magyars (5)
7 Tortoise, this Latin consumed with energy (7)
8 Note, to exercise oneself in this, could mean unscrupulous dealing (5, 8)
9 Tried in judge's private chamber—and perceived the noise of a shutter? (5, 2, 6)
14 To support it I dined to appease (10)
17 Fasten flower in a tree (8)
19 Travelled at an economical speed in voyage to capital *of Denmark* (7)
21 Transport in this raw contraption (7)
23 Tribe with group leader producing a loud ringing sound (5)
25 Part of the mystery is a terrapin (4)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

Radio Wavelengths

1	1053kHz/285m 1089kHz/275m	3	1215kHz/247m & 90-92.5vhf stereo
2	693kHz/433m 909kHz/330m & 88-91vhf stereo	4	200kHz/1500m & 92-95vhf

BBC Radio London: 1458kHz, 206m & 94.9vhf

Capital Radio: 1548kHz, 194m & 95.8vhf

London Broadcasting: 1151kHz, 261m & 97.3vhf

RADIO 1

(S) Stereophonic broadcast
‡ Medium wave

5.00 am As Radio 2. 7.00 Mike Read. 9.00 Simon Bates. 11.00 Peter Powell with the Radio 1 Roadshow. 12.30 pm Newsbeat. 12.45 Paul Burnett. 2.30 Dave Lee Travis. 4.30 Steve Wright. 7.00 Dave Lee Travis with Wheels. 8.00 Richard Skinner. 10.00-12.00 John Peel (S).

RADIO 2

5.00 am Steve Jones (S). 7.30 Ray Moore (S). 10.00 Jimmy Young (S). 12.00 John Dunn (S). 2.00 pm Jean Challis (S). 4.00 David Hamilton (S). 6.00 Don Durbridge with Much More Music (S). 8.00 Charlie Chester (S). 9.00 Marching and Waltzing (S). 9.55 Sports Desk. 10.00 The Arthur Askey Variety Show. 11.02 Sports Desk. 11.03 Brian Matthew with Round Midnight from the Edinburgh Festival. 1.00 am Truckers' Hour (S). 2.00-5.00 You and the Night and the Music (S).

RADIO 3

6.55 am Weather. 7.00 News. 7.05 Morning Concert (S). 8.00 News. 8.05 Morning Concert (continued). 9.00 News. 9.05 This Week's Composer: Tchaikovsky (S). 10.00 Walton and Britten choral recital (S). 10.25 Janacek piano recital (S). 11.15 Kreuzberger String Quartet (S). 12.15 pm Fishguard Festival 1981, part 1 (S). 1.00 News. 1.05 Six Continents. 1.25 Fishguard Festival, part 2 (S). 2.05 French Cello Sonatas (S). 3.05 The Younger Generation (S). 3.40 Haydn, Brahms and Berg (S). 4.45 News. 5.00 Mainly For Pleasure (S). (Medium Wave joins at 6.00 pm). 7.00 Let The Peoples Sing (S). 7.30 Proms 81, part 1: Brahms (S). 8.20 What Books I Please. 8.40 Proms 81, part 2: Jonathan Harvey, Janacek (S). 9.40 Beethoven violin and piano music (S). 10.00 Aleksandr Blok (S). 11.00 News. 11.05-11.15 Mozart (S).

Medium Wave—with VHF except: 10.25 am-6.00 pm Cricket: Sixth Test. England v Australia from The Oval, including 12.35 pm News. 12.40 Six Continents (as VHF 1.05 pm). 1.00 Lunchtime scoreboard.

RADIO 4

6.00 am News Briefing. 6.10 Farming Week. 6.25 Shipping Forecast. 6.30 Today. 8.45 Love Among Butterflies. 9.00 News. 9.05 Tuesday Call. 10.00 News. 10.02 From Our Own Correspondent. 10.30 Daily Service. 10.45 Morning Story. 11.00 News. 11.05 Thirty-Minute Theatre (S). 11.35 Wildlife. 12.00 News. 12.02 pm You And Yours. 12.27 Aspects Of The Fringe (S). 12.55 Weather; Programme news. 1.00 The World At One. 1.40 The Archers. 1.55 Shipping Forecast. 2.00 News. 2.02 Woman's Hour. 3.00 News. 3.02 The Red and the Black by Stendhal (S). 4.00 A Look Sideways At . . . 4.15 Adventure on the High Seas. 4.45 Story Time. 5.00 PM: News Magazine. 5.50 Shipping Forecast. 5.55 Weather; Programme News. 6.00 News including Financial Report. 6.30 Brain of Britain 1981 (S). 7.00 News. 7.05 The Archers. 7.20 Medicine Now. 7.50 Countryside in September. 8.35 Anthony Hopkins Talking About Music (S). 9.05 In Touch. 9.30 Kaleidoscope. 9.59 Weather. 10.00 The World Tonight. 10.30 The Jason Explanation of Fads and Fashions (S). 11.00 A Book At Bedtime. 11.15 The Financial World Tonight. 11.30 Berlioz (excerpt from "Romeo and Juliet"). 12.00 News.

BBC Radio London

5.00 am As Radio 2. 6.30 Rush Hour. 9.03 Morning Star. 10.03 The Richard Vaughan Telephone Programme. 12.30 pm London News Desk. 12.40 MMM . . . Maitland's Midday Music. 2.30 Tony Blackburn. 5.00 News. 5.15 Music On The Move. 6.33 Openings. 7.03 Black Londoners. 8.00 As Radio 1. 10.00-5.00 am Join Radio 2.

London Broadcasting

5.00 am AM—Douglas Moffitt and Douglas Cameron. 10.00 Brian Hayes. 12.00 LBC Reports. 7.00 pm London Life. 9.00 Mike Dickin's Nightline. 12.00 LBC Reports Midnight. 1.00 am Night Extra. 4.00 LBC Special. 5.00 Morning Music.

Capital Radio

7.00 am Mike Smith's Breakfast Show. 10.00 Michael Aspel. 12.30 pm Mike Allen. 1.00 First Report. 1.10 Mike Allen (continued). 3.00 Roger Scott. 6.30 London Tonight. 8.30 Peter Young (rock music). 10.30 John Sachs's Late Show. 12.00 Midnight Special.

ENTERTAINMENT GUIDE

OPERA & BALLET

THEATRES

CINEMAS

ART GALLERIES

FINANCIAL TIMES

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THE ARTS

Tate

Sculpture for the blind by WILLIAM PACKER

Some five years ago the Tate Gallery somewhat tentatively put on, from within its own sculpture collections a small exhibition designed specifically for the blind or partially-sighted visitor. The idea was as simple as it was imaginative, that under proper supervision the sculpture could actually be handled comprehensively. So enthusiastic and overwhelmingly grateful was the response and indeed so memorable the actual event, that it comes as a considerable shock to realise that so long an interval has elapsed.

But this is the Year of the Disabled, and late in the day or not, provides a commendably opportune moment to revive the scheme. Until November 1 an entire gallery at the Tate on the modern side is given over to the special installation, building on the mistakes and experiences of last time: good strong lighting instead of a certain tactful gloom, significantly distinctive and textured flooring to indicate the proximity of the works themselves (though the differences in level might cause a stumble or two), basins to make sure of the cleanest hands, volunteers to guide and assist as much, or as little, as necessary, and catalogues and labels in Braille.

All who make sculpture or work with it, or own it, know the value and delight in handling it and such privilege could quite reasonably and responsibly be extended. The heartening generosity with which certain artists have made their own work available for this exhibition, and thus this particular purpose, suggests both part of the solution to the problem and a salutary freedom from a limiting preciousness.

Again so enthusiastic, committed and hard-working is the response, quite literally so deeply-felt, that one cannot but be persuaded that such display, smaller perhaps but significant, should be more regularly, even permanently, available. There are certain practical difficulties and constraints to be overcome, in terms both of administration and, most especially, of conservation; but one only has to witness the informing delicacy with which these particular hands search out and read form, image, mass and texture, to know that they *must* be overcome.

Of course certain works will always be too fragile, too much at risk, ever to allow them to be so employed; but there are so many more that could be used. Bronze, in particular, is very tough stuff, as all the archeological museums in the world can demonstrate; and when even the most ordent conservator will allow the most fugitive watercolour to see the light of day occasionally, to accept the minor and reversible modification to a patina is hardly to put a work at risk.

All who make sculpture or work with it, or own it, know the value and delight in handling it and such privilege could quite reasonably and responsibly be extended. The heartening generosity with which certain artists have made their own work available for this exhibition, and thus this particular purpose, suggests both part of the solution to the problem and a salutary freedom from a limiting presciousness.

The works themselves comprise a fairly mixed bunch, a somewhat arbitrary selection of *post-war British sculpture*, Gaudier-Brzeska's *Bird Swallowing a Fish* circa 1914, and Epstein's war-time *Ernest Bevin* apart: we have a Frink dog, and a Flanagan elephant, a Moore helmet—and some of his tools and trouves, and a Turnbull mask, a Pope block of stone, a Paolozzi relief, a Nimptsch nude, and so on.

And though the works are certainly unexceptionable individually, collectively they do generate an uncomfortable, even somewhat patronising atmosphere, as though to say: "this is all we can let you have for now." Such disquiet stems directly from the lack of any coherent programme or policy; and when it is known that the one show implies the next, no matter whether as continuation or contrast, so selection will inevitably grow tighter, more thoughtful and purposeful.

I would not for one moment wish to suggest that this is a bad show—far from it. But it does suffer conspicuously from its self-imposed limitation of choice. Above all, this is no time for the Tate to congratulate itself for having patently done the right thing for once, achieved indeed an important if qualified success, and then do nothing more for another five years.

'Olympia,' bronze sculpture by Uli Nimptsch

Edinburgh Festival

La clemenza di Tito

by RODNEY MILNES

It is hard to say precisely why the second performance at the King's Theatre of the Cologne Opera's *Tito* (their final offering at this year's Festival) was less than wholly satisfying: the constituent parts were good. Jean-Pierre Ponnelle's staging, seen in London 12 years ago, wears well and came as a welcome relief after his grotesque television version shown here in June.

His permanent yet flexible set in 18th-century classical style serves the drama efficiently, not least in providing a gallery in which to keep the chorus out of everyone's way, and his production style is a happy fusion of grand, classical gesture in keeping with the work's *operaseria* ancestry and a sort of protonaturalism to match the way that the music stretches far ahead into the 19th century.

The cast, too, was of high standards. Brigitte Fassbaender's Sextus was magnificent. In excellent voice, she struck exactly the right balance in her response to the musical and dramatic demands of the role, giving full vent to the agony of the character's divided loyalties, with classically moulded and impeccably stylish singing. Werner Hollweg, another notably musical singer, caught the balance less precisely in the title role. The solos were excellently sung but in recitative and ensemble his search for dramatic truth led him off the note rather too often. Still, perhaps rather this than the stuffed shirt that even Mozart's Titus can so easily become.

The American soprano Kathryn Montgomery caught the volatility of Vitellia, the Joan Crawford role, with bold strokes though without ever quite going over the top. She controlled her victim, Sextus, with a mixture of childlike wheedling, nannyish bullying and serpentine cunning, switching from one to the other in a powerful study of a psychotic. Having handed Sextus the fatal dagger with a grand gesture, à la Mrs Siddons, she snatched it back at the next twist of the plot and plunged it down her cleavage — a dangerous gesture with anything but a prop weapon. She was also, alas, vocally volatile in this supremely testing role, her passage work unwieldy, her intonation unpredictable. When she hit the notes precisely the effect was thrilling, but when not, not. Luckily she reserved her most exact singing for "Non più di Fiori."

The enunciation of a commendably full text was variable. Fassbaender and Hollweg made every word tell and so did Thomas Thomaschke, a dependable Publius. The Greek mezzo, Daphne Evangelatos, a rather too gentle Annius, was less clear and although Georgine Resick phrased Servilia's music with much sweetness, she could have been singing in almost any language. The woolly-toned and imprecise choral singing was frankly unacceptable.

For their *Barber* earlier in the festival, the company used the Scottish Chamber Orchestra; here they fielded their own band and comparisons are odious. Ill-tuned brass and a perfunctory tempo from John Pritchard got the evening off to a poor start and thereafter the special insights that Mr Pritchard can and so often does bring to Mozart where only intermittently evidenced. With more flexibility from the pit, for example, Miss Fassbaender could have made the final flourishes of "Parto" even more thrilling than they were. A good routine performance then, with less than good routine playing. At least it made one look forward to the Royal Opera's revival next season.

Comedy

Steaming

by B. A. YOUNG

In the run-down Turkish bath somewhere on the No. 14 bus route that Jenny Tiramani has designed for Nell Dunn's *Steaming*, you can see all the regular customers, and I really mean it, you can see all of them. They are Mrs Meadow and her daughter, who is, as my grand mother used to say, only up to Friday night and has a neurosis about policemen; Josie, who is so devoted to the sexual act that she would rather earn her living by it than by working; and two middle-class ladies, Nancy and Jane, both of them separated from their husbands.

Josie is the most worth seeing, for not only is Georgina Hale, who takes the part, lovely to look at, but she has a lot of good dirty lines, she is most convincingly drawn, and she gives a marvellously funny performance. Mrs Meadow is a bit of a stock character, and is used to put over some of Miss Dunn's stock opinions about the sufferings of the poor. Maria Charles makes them sound almost fresh. Grenda Blethyn as her witless daughter Dawn seems to become less witless as the evening goes on, and when she is at last persuaded to remove her plastic wrapper she looks pretty healthy for a girl who hasn't been out for 16 years, but these points are down to Miss Dunn.

Nancy and Jane (Sheila Rushkin and Meg Davies), *et que diable font-elles en cette galère*, are posh and have only posh worries until the thunderclap comes—the baths are to be closed down to make room for a library. Then all differences are shelved as a campaign is launched against the Council. Why the five regulars and the attendant, Violet (Jo Warne in a one-piece bathing suit), should have decided to elect Josie as their spokesman, when she is barely literate, must be between Miss Dunn and her conscience; but the truth is that there's very little plot, and any shift to add a bit more fun to an already funny evening is probably a good thing.

Not that fun is the only point of the play. It contains a heap of feminist propaganda, much of it pretty familiar, but put over with generous sympathy. Josie indeed is positively enthusiastic about men in their right place (bed), but naturally some of the others try to talk her out of it. Probably it's best to regard the play just as a very original comedy, excellently directed by Roger Smith (who did *Duet for One*); and if the propaganda sharpens the comedy, as in *Arms and the Man*, say, that's just an extra point. Feminist or not, *Steaming* is a very good evening out, no doubt of that. It's a shame it isn't a little bit better; but I doubt if its probable audiences will mind. I recommend them, incidentally, not to sit in the first half-dozen rows, where you can't see much.

Lowe premiere for Royal Court

The world premiere of Stephen Lowe's *Tibetan Inroads* will be presented at the Royal Court Theatre from September 23. William Gaskell directs and the music is by Andy Roberts.

Gate, Notting Hill

Maske by B. A. YOUNG

Maske is a catch-all title to cover an evening of three of Carl Sternheim's *Scenes from the Heroic Life of the Middle-Class*, which are called here *The Underpants*, *The Snob* and *1913*. As all of these are full-length three-act plays, the director, Lou Stein, has cut them down to their bare bones, giving us summaries without subtleties.

The Underpants (better known as *Bloomers*; I doubt if that other word was known in 1911, when the action passes) comes out best from this surgery, but even that loses a good deal of its value. The theme is Sternheim's favourite, the hero's profit from people who think they are profiting from him. Louise, the simple little wife of civil servant Theobald Maske, accidentally loses her, well, underpants in the street just as the Emperor is driving past. Two people who saw the misfortune follow her home and hopefully rent the rooms that are on offer in her flat, Scarron, a disciple of Nietzsche, and Mandelstam, a Jewish barber. Neither makes the killing he expects, though Scarron nearly does.

But in the end the Maskes find themselves with both of their spare rooms profitably let and Maske convinced that he is now prosperous enough to give Louise a child. We meet the childe in the next play, *The Snob*. Although only a year has passed, Christian is on the verge of being made managing director of a vast manufacturing company. As a by-product of this appointment he has the chance to marry Marianne, daughter of Count Palen, a colleague, but he is unhappy about his middle-class origins—so he sends his old father and mother to live in Zurich and claims that they are dead.

As before, he gains undeserved success, for old Theobald comes back from Zurich to report Louise's death and the Palens take to him at once. So by 1913 Christian has grown to be 70, father of three difficult children and a boss on the scale of Alfried Krupp. He also has a secretary, Wilhelm Krey, who under the twin influences of Marx and Nietzsche, is going to be the leader of a new German movement dedicated to the destruction of capitalism.

Christian has become a Baron, so poor Krey is the only middle-class character remaining, and surely ordained for disaster. On the very night when he is due to go and take over his movement like some proto-Hitler, a colleague finds him involved with the Maskes as if he were one of them. No doubt he becomes one of them, though the fourth play in the set, The Fossil, not done here, doesn't say so. At any rate his chances of leading a Marxian-Nietzschean outfit are gone.

I don't know why Mr Stein should have wanted to chop these plays up so destructively. They now last an hour each, but they only give the highlights. The playing, especially by John Abbott, Prue Clarke and Anthony Head, is not at all bad, but over-emphatic, as if it were being done in the open air. If the evening sends some people back to Sternheim, at least that's better than nothing.

Leonard Burt

Margaret Tyzack, Paul Eddington, Mary Maddox and David Schofield

Lyttelton

Who's Afraid of Virginia Woolf?

This lacerating play by Edward Albee, handsomely revived by Nancy Meckler for the National Theatre, completes a most extraordinary American week in the London theatre. Simon, Medoff, Weller—all those miserable marriages and now, just to top the lot, the modern American matrimonial shindig par excellence.

Readers may remember that, a long time ago, Joan Plowright was cast as Martha, the boozy Earth Mother of the Eastern seaboard. But she left the production after a difference of opinion with her vical chords. Her replacement is Margaret Tyzack, and no-one need start making excuses for her. While certain points of the play cry out for a more slatternly, blowzy exhibition, Tyzack's performance is a genuinely fresh reading, replete with vicious understatement and all the more effective for suggesting that Martha has not let go of herself completely. She cuts an attractive figure in the series of grim party charades, leaving Paul Eddington's superb George to dominate the proceedings even when suffering insults while poised, half-listening, over the drinks tray.

Although 20 years old, the play survives partly because people tearing each other to shreds always provides a jolly spectacle in the theatre but chiefly because of the classical structure. The unities of time, place and action are relentlessly observed and the fourth wall tactic works a treat in a production that has complete confidence in the text: we are drawn inexorably into the college sitting room where George and Martha are playing late night hosts to a new young couple on the campus.

In addition to the Aristotelian rules, there are the rules devised by George and Martha for conducting their private rows in public. While these rules are broken all the way along, there remains the pretence that no such thing is happening. George is a crumpled history teacher who has failed to live up to his father-in-law's expectations. Martha's dad is the college President and the image of George's dwindled ambition, with its sexual corollary, is suddenly burnished by the new man's callow, go-getting exterior. Nick is not so much a hunk as a hustler, a point well conveyed by David Schofield, whose wound-up performance is a large factor in the show's success.

Nick's wife, Honey, as played by Mary Maddox, has qualities of brittleness and vulnerability. Honey's hysterical pregnancy is the equivalent of the fantasy lie that fuels George and Martha's weird relationship; the lie that a son is about to return home for his 21st birthday. The remarkable thing here is that Paul Eddington makes the shattering of this fantasy a condition of his future life with Martha and the play ends on a surprisingly optimistic dying fall.

Tanya McCallin's set and Lindy Hemming's costumes give the evening the necessary realistic solidity without which such bizarre notions as "humping the hostess" and "getting the guests" would not pack the right punch. The continuous consumption of alcohol has both a relaxing and a slowing-down effect on the quartet, so that each new wound can be ripped open for bleary-eyed inspection.

Finally, the show is a triumph for Paul Eddington's muted expressive skills. The speech about the boy who shot his mother and killed his father in a road accident—the basis of his unpublished novel—takes on a harrowing ambiguity before the truth of it is out. The performance is full of subtle shifts of gear and baggy-eyed defeatism. I came again to the play thinking of it as Pinter with the gloves off. I came away purged—that old catharsis again—and reflecting on the small cruelties we inflict on each other over the morning coffee.

MICHAEL COVENEY

Albert Hall/Radio 3

Friday's Proms

For the second time in three days the Proms audience and Radio 3 listeners were treated to exemplary performances of Sibelius. On Wednesday last Simon Rattle had conducted the City of Birmingham Symphony Orchestra in an exciting account of the Second symphony, and Friday's concert began in complete contrast, with a weighty and scrupulously measured *Pohjola's Daughter* for which Paavo Berglund took charge of the London Symphony Orchestra. If there was any doubt of Berglund's quality in Sibelius when he was in charge of the Bournemouth Orchestra, it has been dispelled in his recent appearances with the LSO. Last season in the Festival Hall he conducted a memorable First symphony and here he brought enormous surety to the most problematic of the tone poems, in which the boundaries between programme and symphonic construction are continually blurred.

Everything about the performance was convincing. Even in the internal orchestral balance —favouring brass against strings at climaxes, always giving prominence to the lower wind—immediately proclaimed Sibelius: the music was invariably allowed to unfold itself naturally, without any false urgency.

In *Pohjola's Daughter* every silence was made to count; the music enclosing them firmly textured, and also in Sibelius's violin concerto which followed it, Berglund maintained an equally firm grip, providing his soloist with the surest of foundations.

With such a confident backdrop Ida Haendel was encouraged to her most assurred playing, precise and sweet-toned. Violinist and conductor combined to make the opening of the first-movement recapitulation an overwhelming moment; the tempo was slowed almost to a halt and the orchestral sound darkened quite menacingly. Progressively the remaining movements were more buoyant; the slow movement was hymned in long burnished phrases, and though the finale was still maintained at a steady pace, it was always sharply responsive to every change of mood.

If Berglund's control of the longest paragraphs in Sibelius made one hope to hear him in Bruckner, the second half of Friday's concert produced a Brahms's first symphony that was almost as impressive. Here also were what, given more exposure, could become Berglund's hallmarks: the emphasis on bass lines, the predominantly slow tempi with sudden expansions for woodwind detail, the progress of the music in rough-edged chunks. On this occasion the roughness was perhaps emphasised by some sweet-and-sour woodwind chording, and the solo oboe playing was often under suspicion, but the accumulated power was most impressive. The central episode of the third movement had as quite unexpected momentum, the finale gathered pace towards its close, but the excitement was always logical, never cosmetic.

★

Ninety minutes after the last notes of the Brahms symphony, the Albert Hall platform had been cleared and the auditorium filled afresh to bursting point for the first all-night Prom. The sitar player Vilayat Khan had devised a programme of Indian rages to run from 11 pm to 7 am the following morning, his selection carefully tuned in mood and time of night. It proved to be much less of a marathon test of endurance than the prospect of an eight-hour concert might suggest; the continual changes of instrumental colour and performer, the slowly developing solos and extraordinarily sustained concentration of the audience all combined to make the proceedings compelling.

It would be invidious to select too many highlights, but Vilayat Khan's opening sitar solo, creating music, Orpheus-like, out of primeval sounds and only gradually flowering into an ornate solo was vitally important in establishing the concert on its exalted level. Later Niyaz Ahmed Khan, contributing a solo vocal raga in the small hours, gave the most prodigious demonstration of physical endurance and virtuosity, the sounds as subtly coloured and inflected as those of any instrumentalist.

ANDREW CLEMENTS

CRICKET BY TREVOR BAILEY

Uncertainty is part of the charm

ALTHOUGH the final Test looks destined to finish as a draw today, the unexpected has occurred so frequently in this remarkable series that yet another bizarre outcome would really come as no surprise.

After all, Australia in their first innings seemed destined for a total of around 400 when they were 120 for none, having been inserted; while England squandered the prosperity of 240 for three to the second new ball with an even more sensational collapse.

The reason why this fight for the Ashes caught the imagination of the entire country has been the uncertainty — perhaps cricket's greatest charm—which has happened in every match. Fortune has repeatedly swayed from side to side, and the weather has allowed a definite result in four out of the five matches completed.

It has also thrown up several heroes. For England, there has been the man of the series, Ian Botham; the fast bowling of Bob Willis, whom many had believed to be finished; the keeping of both Taylor and Knott; and last, but not least, the skilful captaincy of Brearley.

Australia have discovered an oustanding fast medium seamer in Alderman; Lillee is still a high-class bowler and Border has batted very well despite insufficient support.

Australia, who made one of the least impressive starts to a tour in the monsoons of May, nevertheless won the Prudential Trophy—although England are reckoned to be the experts in limited-overs cricket—and went on to take the first Cornhill Test and to draw at Lord's. Mike Brearley was appointed for the third Test. England, thanks mainly to Botham and Willis, levelled the count at Headingley after being forced to follow on, took the lead at Edgbaston in another cliff-hanger, and retained the Ashes at Old Trafford despite a fine fight back by the Australians in their second innings.

The enormous interest aroused has been reflected by capacity crowds on the first three days of the final encounter, which is marvellous for the game and the game's finances. Even though much of the cricket, especially the batting, has been well below international standard, sluggish over rates have been forgotten in the excitement, and both teams have been able to manage with only four main line bowlers.

Australia have been unlucky to have lost the services of both Lawson and Hogg through injury, which meant that they were forced to include Whitney, who is not international class, in the last two Tests, while Bright is a fairly ordinary left arm spinner.

The appointment of Keith Fletcher as captain of England for the tour to India (which should take place because the Indian board of control desperately needs the money it will produce) was very predictable. With Brearley unavailable there were not too many alternatives.

The majority of contenders among the current county captains either had no Test experience or came from overseas.

Keith, whom I signed for Essex straight from school, has proved himself to be an astute tactician with the county. He has twice been to India. He is also one of the best players of spin in the country, has an average of over 40 in international cricket, and therefore possesses a considerable advantage over Brearley in that he should also justify his place as a player.

I believe he will do a highly competent job. But winning a series in India is by no means easy—the Indians are far more formidable over there than on English pitches.

TENNIS BY JOHN BARRETT

It's the contest of the century

ON SEPTEMBER 3, 1881, at the Newport, Rhode Island, Casino, Richard Sears won the first of his seven successive U.S. National singles titles. Four months earlier the U.S. National Lawn Tennis Association had been formed at the Fifth Avenue Hotel in New York City.

The 13th U.S. Open championships, which begin today at the four-year-old U.S. National Tennis Centre in Flushing Meadow Park, New York, promises to be a fitting celebration of these twin centenaries.

With prize money of $907,500, this year's championships are the richest in the world. With improved spectator accommodation and unprecedented demand at the box office, last year's record attendance of 364,370 from 23 day-and-night sessions seems certain to be broken.

With $1,175,000 income from commercial sources, the USTA has set another record — a $250,000 improvement on last year's figure and $800,000 up on 1976 when this sort of sponsorship was launched.

In addition, a record number of 938 writers and photographers from 30 countries will cover the event. As well as 40 hours of domestic TV coverage, the finals will be carried live by 14 foreign TV networks, including the BBC.

Apart from Bjorn Borg's 10th attempt to win his first U.S. Open — "my top priority for 1981," he told us at Wimbledon —against the holder and top seed John McEnroe, who has deposed the Swede from the No. 1 world ranking, there is increasing pressure from below.

Ivan Lendl of Czechoslovakia, the third seed, and Argentina's No. 5 seed Jose Luis Clerc, who has won five tournaments since Wimbledon, are drawn to meet in the quarter-final for the right to play McEnroe — who must first overcome fellow-American Gene Mayer, seeded No. 7.

On the fast asphalt courts which he has never liked, Borg has some difficult tests against good service. First Yannick Noah of France, and then, probably, left-handed Roscoe Tanner, who beat Borg here two years ago, will test him.

Then Jimmy Connors, seeded No. 4, is likely to be looming as a threat in the semi-final.

The regrettable absence of the British No 1, Buster Mottram, means that only two British men will be competing. A rejuvenated John Lloyd opens to-day's Statium Court programme against Connors without any real hopes of success; and Jonathan Smith plays tomorrow against the improving Israeli No 1 Shlomo Glikstein with a more realistic chance to win.

As at Wimbledon there is controversy surrounding the womei's leading rankings, which have slavishly followed the current computer rankings—mistakenly in my view because the figures ignore the difference made by the court surface.

To have seeded Hana Mandlikova at No 5 after the 19-year-old Czech has enjoyed such a splendid year as Australian and French champion and finalist at Wimbledon—as she was here last year—is ridiculous.

The draw has thrown Miss Mandlikova in top seed Mrs Lloyd'sc quarter, and after the convincing win by the Czech in the French final on a clay surface much more suited to Mrs Lloyd's patient game, one must logically forecast an upset here.

The allows for Mrs Lloyd's success in the Wimbledon final, wherethe Czech girl never did herself justice, and the fact that Mrs Lloyd has lost only twice this year.

To seed 16-year-old Andrea Jaeger at No. 2 ahead of the 1979 champion Tracy Austin is also questionable. Both have had injury problems.

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A government is assassinated

THE ASSASSINATION of the Iranian President and Prime Minister puts in doubt how long the Islamic Republic can survive such a casualty rate among its top leadership. It is only two months since Ayatollah Beheshti, the leader of the ruling Islamic Republican Party, was killed with 27 leading members of the Iranian parliament. Last Sunday's explosion proves that the daily tally of executions since then has not weakened the capacity of the Government's enemies to strike back with savage accuracy.

Ayatollah Khomeini remains the crucial figure in Iranian politics and it has long been a cliche among diplomats and other observers to suggest that there would be no real change in Iran until he dies. But with the killing of so many of his most senior supporters even this must be in question. His own physical survival is also threatened since his enemies have proved once again that they have the ability to penetrate all the Government's security arrangements.

Organised group

The group most likely to be behind the assassination of President Rajai and Prime Minister Mohammed Bohonar is the Mojahedin, a powerful well organised group of progressive Moslems. Mr Massoud Rajavi, their leader, is now in exile with former President Bani-Sadr in France. Despite the execution of 600 of their members in revenge for the killing of Ayatollah Beheshti their military strength appears to be largely untouched. If the Islamic Republic, as presently constituted, falls, then they are likely to be the beneficiaries. Most of the other exile groups, mainly supporters of the late Shah, have shown no sign of having any real influence in Iran.

The strength of the Mojahedin has largely been of the present Iranian Government's own making. So long as President Bani-Sadr was in office he formed a sort of "loyal opposition" to Ayatollah Khomeini. He was the focus for those who supported the revolution but opposed many aspects of the Islamic Republic.

By displacing him the fundamentalists of the Islamic Republican Party exchanged an ineffective opponent who had no organisation behind him for a far more potent and violent enemy in the shape of the Mojahedin. If Mr Bani-Sadr returns to Iran it will be as the dependent of this party, whose leader he has already nominated as his Prime Minister.

When Ayatollah Beheshti was blown up in June the Government compounded its previous errors. It launched a random campaign of arrests and executions which forced surviving members of the moderate opposition to ally themselves with the militants of the Mojahedin in order to fight back. The regime seems to have done enough to alienate many Iranians but not enough to destroy its enemies.

Iraq conflict

At the same time the battle for power between the Government and its domestic enemies has diverted the country's rulers from coping with any of the other pressing problems facing Iran. The conflict with Iraq still rumbles on and is by no means a phoney war. But although President Bani-Sadr had been accused of military incompetence there is no sign of his successors doing any better. Oil revenues are diminishing because of the high price of Iran's crude and many contracts with the oil companies come up for renewal over the next three months.

All this is likely to lead many Western leaders to hope that the Islamic revolution is collapsing, torn apart by faction fighting and economic chaos. But it is as well to bear in mind that the Mojahedin was partly responsible for taking the American hostages in 1979 and its antipathy to the West is probably greater than many members of the Government they are seeking to destroy.

Most powerful

All the points made last year, when the hostage crisis dominated television screens across the world, about the strategic importance of Iran remain true today. Iran is still the most powerful state on the Gulf and has the potential to resume rapidly its position as the world's largest oil exporter after Saudi Arabia. But whatever the outcome of the savage battle for power now being fought in Iran it is unlikely that anything will quickly emerge which the West will see as much of an improvement on the present Government.

Public Trustee in the spotlight

THE FUNCTION of the Public Trustee is an honourable office which executes society's determination that the estates of minors, the disabled, the mentally ill or those unable to manage their own affairs should be preserved in safe hands. Fewer individuals these days voluntarily choose to have their trusts administered by the Public Trustee because over the years independent investment management has become both more sophisticated and more tightly regulated. But there will always remain a core of people unable to choose an independent manager and they will continue to need the security provided by a public official backed by full Government guarantee.

Scrutiny

The importance of the Public Trustee Office can partly be measured by the fact that it still manages nearly £300m. For this reason alone it ought to be subjected to periodic public scrutiny if only to blow away the dust which must have accumulated in an institution first set up in 1906.

The occasion for such a review has been provided by complaints by the parents of three victims of the Thalidomide drug that compensation funds deposited with the Public Trustee have performed much worse than if they had simply been locked up in a building society account. Lord Hailsham, the Lord Chancellor, who is responsible for the Public Trustee Office, has been asked to investigate the complaints and he can hardly fail to do so.

Although there is no clear evidence at present on which to assess the validity of the complaints, the spotlight they have thrown on the Public Trustee in the past week has already exposed areas about which questions can properly be asked.

Rubber stamp

The annual report of the office to the Lord Chancellor is a flimsy affair which contains none of the detailed investment statements volunteered or required from funds managed in the private sector. Internal reporting and monitoring also looks minimal. There is a distinguished advisory panel but with the scarce information apparently at its disposal it can hardly do more than rubber stamp the decisions by the investment managers.

There are only 10 such managers administering some 6,000 separate trusts worth £220m and a further £60m of money belonging to certain pension funds, friendly societies and part of the money held in court on behalf of the mentally ill. None of the managers has any outside investment experience. They are all career civil servants.

The investment strategy applied to these funds also raises questions. The bulk are administered under the tight constraints of the Trustee Investments Act 1961 which limits the trustee's room for manoeuvre. Over the years some of the provisions of the Act have been relaxed for other investment organisations such as local authorities and authorised unit trusts. But the Public Trustee is still required to meet the original specifications which include the requirement that each of the trusts in its hands must be separately invested, though their average size is only £30,000. The Public Trustee himself has tried unsuccessfully to get new legislation which would loosen these constraints.

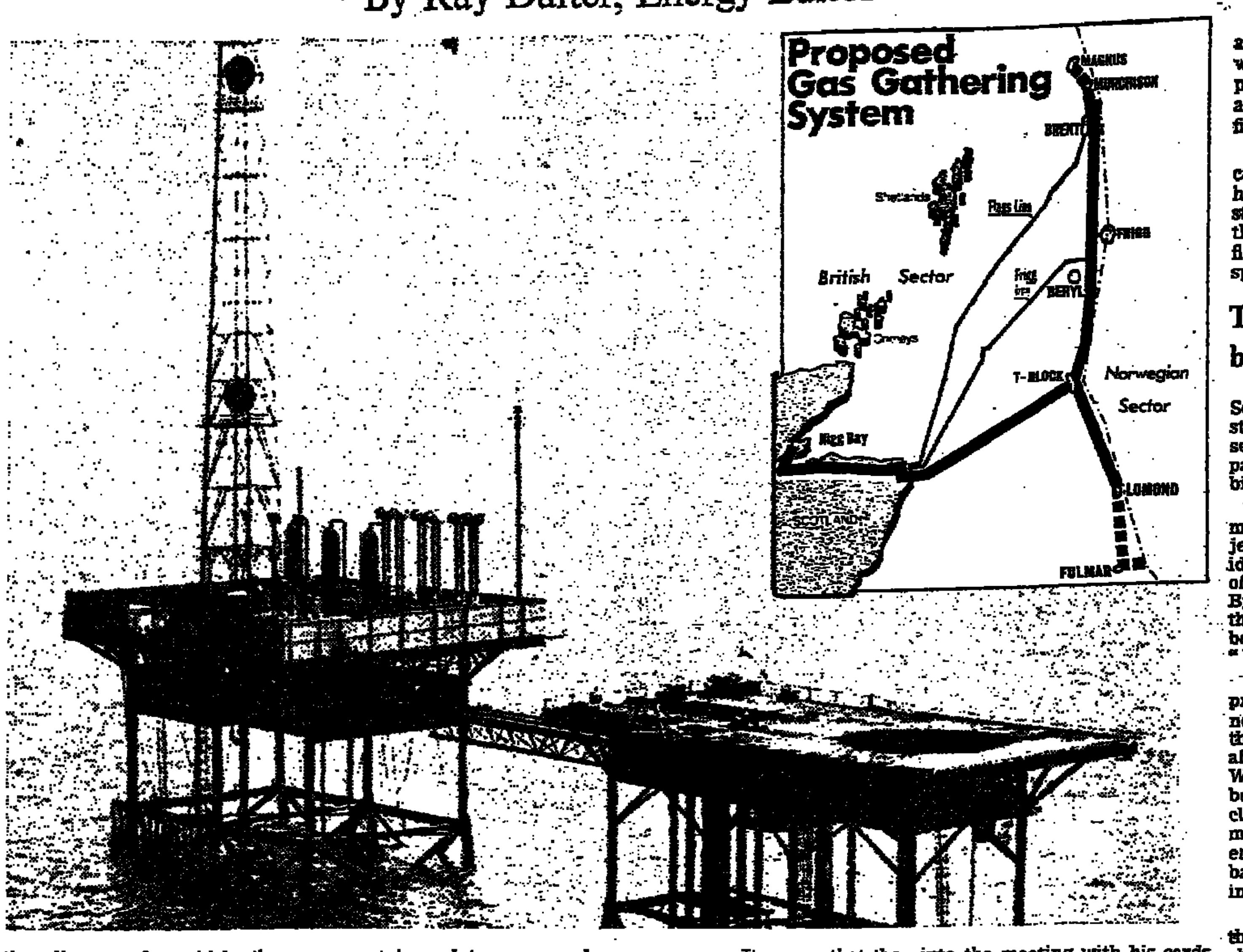
Accountable

There is plenty here for Lord Hailsham to attend to. The Public Trustee of all people should be fully accountable. The funds under his care should be seen to be properly managed. His investment performance should, of course, be governed by prudence and caution—funds in public trust can never be expected to perform in line with the high fliers in the private sector. But their performance should not be held back by avoidable constraints.

THE NORTH SEA GAS PIPELINE

Anatomy of a £2.7bn decision

By Ray Dafter, Energy Editor



MRS MARGARET THATCHER is about to attempt to cut the Gordian knot that has been threatening to strangle one of the most ambitious engineering projects conceived in the UK in recent times: the proposed £2.7bn North Sea gas-gathering system.

Senior Government Ministers are being called together at a meeting scheduled for today in what appears to be a final attempt at breaking the deadlock over the financing of the pipeline network.

The Prime Minister has already made it clear that she wants to see the 700-kilometre pipeline network developed. Designed to be in operation by the end of 1985, the system would collect some £25bn worth of natural gas from about 20 fields and thus help to underwrite the UK's energy security.

In the meantime, the offshore manufacturing and service industries would benefit from a spate of hefty orders. Mr Ian MacGregor, chairman of British Steel, has been applying his own pressure, pointing out that pipeline orders could secure the jobs of 3,000 people in the corporation.

But the Government has put itself on the rack of its own policies. On the one hand, it has repeatedly expressed the wish that the project should be financed mostly from private funds. Mr David Howell, Energy Secretary, is urging the creation of a "private utility" with a mix of investors including British Gas (with a stake of about 30 per cent), oil companies, gas users and financial institutions.

On the other hand, the Government has found itself tethered by the realisation that none of the private interests would be prepared to put up risk capital without some form of Government guarantee. And that has implications for the Public Sector Borrowing Requirement (PSBR).

If the Prime Minister is to find a solution to the problem, she must reconcile the disparate views of those who will be involved:—

The oil companies

The oil companies recognise they will have to find some means of transporting ashore new supplies of natural gas — the Energy Department's restrictions on gas flaring will see to that. They are not unanimously behind the network as conceived by the Government.

Some argue that a substantial proportion of the future gas supplies could be carried in the existing pipeline systems—the Frigg and Brent lines—which by the late 1980s will have plenty of spare capacity.

The most public challenge has come from two French groups, Elf Aquitaine and Total, which have told the Government that they would prefer to feed gas from their North Alwyn Field into their own Frigg system, rather than into the proposed gathering network. As a result, the companies are still waiting to be officially awarded the seventh round oil exploration licences for which they successfully bid.

The companies have long complained that the British Gas Corporation, as a monopoly buyer, leaves them in a weak negotiating position so that they have had to accept low prices by international standards. As a result, some companies in the southern sector of the North Sea are still being paid only 3p to 4p a therm compared with the 28p a therm British Gas charges domestic customers.

The pricing issue has been clarified to some extent by the Mobil consortium's recent agreement to sell Beryl Field gas for an estimated 16p a therm — regarded as much more acceptable by the industry. The Beryl gas is earmarked for the gas-gathering network. It is significant that Mobil and British Gas are two of the companies appointed by the Government to form the steering group for the pipeline project. The third member is British Petroleum.

The oil companies are also taking another tack. Many have said that they would want to offset any investment in the gathering scheme against profits on their North Sea operations. However, the Government is likely to reject this latest move in the industry's attack on the present oil and gas taxation system.

But some carrots may still be dangled in front of companies willing to invest in the early stages of the pipeline development. They may be offered a preferential rate of return in the early stages. Initial investors in a pipeline company can expect a return around 9 to 10 per cent in real terms, according to current thinking in Whitehall. Companies with gas to transport may also be offered a priority right of carriage if they inject funds. That might be important if, in the late 1980s, the pipeline system is full.

British Gas Corporation

British Gas Corporation: Sir Denis Rooke, the corporation's chairman, feels that British Gas should have a major stake in the project—much bigger than the 30 per cent share envisaged by the Government. He points to the £2bn pipeline system now being built on the Norwegian side of the North Sea median line. Statoil, the state-owned hydrocarbons corporation, has been allocated a 60 per cent stake in that venture.

Sir Denis sees the pipeline as a chance for the corporation to regain some of the importance and influence now being eroded through the Government-directed sale of Wytch Farm oil assets and the disposal of its appliance business.

Above all, Sir Denis is anxious for the pipeline to be built. The 11 trillion (million million) cubic feet of natural gas that is expected to be collected by the system will give the corporation important security of supply in the second half of the 1980s and the 1990s.

The Energy Department

The Energy Department supports the scheme for much the same reason. It argues that the system would provide the most effective means of collecting gas not only from major fields but also from small discoveries. The existence of a full integrated pipeline network, capable of carrying both dry gas (methane) and wet gases (used as chemical feedstocks) should encourage the development of economically-marginal fields, it argues.

According to the department, the energy equipment industry would have an opportunity to boost its reputation through the construction of such a major project. At present the UK offshore industry is winning over 70 per cent of all the orders in the British sector of the North Sea.

The most vociferous supporter of the scheme within the department, is Mr Hamish Gray, Minister of State for Energy with special responsibility for oil and gas policies. "This project has the potential for generating and maintaining jobs, providing major orders for industry and producing a most welcome source of revenues for the Treasury," he said.

As Conservative MP for Ross and Cromarty, Mr Gray has strong political reasons for supporting the scheme. On the back of the pipeline project a major chemicals complex could be built at Nigg Bay, in his Scottish constituency.

The Treasury

The Treasury is predictably cagey about pledging Government money to any scheme which might push up public borrowing. Sir Geoffrey Howe, the Chancellor, will be going into the meeting with his cards close to his chest. He is determined to avoid the impression that — even for a project with such grandiose energy and security implications — the Treasury will prove a soft touch in putting up funds which, by rights, the private sector should be committing.

According to the Treasury, if the project is so risky that the private sector needs Government guarantees to go through with it, then it probably is not worth putting into effect.

Such a view — which many in private industry would regard as over-simplification of the criteria for Government support — is of course partly a bargaining ploy to ensure that the Treasury secures the best terms for any eventual support.

But it does mean that Sir Geoffrey will need a lot of persuading before he brings out his cheque book.

The Treasury distinguishes between two different types of financing methods which have been broached. Direct borrowing by British Gas would undoubtedly add to the PSBR. But the provision of government guarantees for borrowings by a consortium owned predominantly by the private sector would not—as long as the guarantee were not called.

Even so, the Treasury is concerned that a guarantee would imply a contingent burden on the PSBR, and wants to avoid setting a precedent.

Sir Geoffrey is also worried by the gas price guarantees that British Gas may have to grant oil companies as a price for their support in the project.

Any price level agreed will affect British Gas's profitability when and if the pipeline is completed—and will inevitably affect the whole public sector's finances.

Sir Geoffrey will have to be careful, however, not to take too hard a line. That would strengthen his critics' claims that the Treasury adopts too inflexible an approach on capital spending by the public sector.

The banks

The banks' role in the North Sea gas gathering scheme has still to be worked out but they seem destined to play a key part in what could be the world's biggest project financing.

The key to the banks' involvement in the gas gathering project will be their ability to identify the risks involved and offset them as far as possible. By looking for possible pitfalls the banks can turn what might be an equity-type risk into a "bankable proposition."

Two main problems about the present project make the banks nervous. Its sheer size means that over 100 banks will probably have to be involved. Whereas the Government might be able to lean on the Big Four clearing banks to lend the money, it cannot hope to influence the dozens of foreign banks which will need to be in on the act.

The other problem is that there are still too many variables in the current project which the banks cannot evaluate.

The banks need convincing that there is enough gas in place to pay off their loans, that the project will be completed on time and that the price of gas will not be held down by the monopoly purchaser — British Gas.

For Mrs. Thatcher and her Cabinet colleagues the choice is stark. Either they can decide that the pipeline network is of vital importance in strategic energy terms. In that case they will probably have to swallow the potential embarrassment to the PSBR to put the show on the road. British Gas would be told to fund, or underwrite, the initial investment of around £60m this year and £230m in 1982, on the asumption that oil companies and other investors would be drawn into the project.

Alternatively, the Government can wash its hands of the whole project and put the ball back into the oil companies' court. Companies have built — and financed — their own gas transportation systems before and this could happen again. Although this option ties in with the Government's free enterprise philosophy, the drawback is that the individual pipelines may not be accessible to the developers of small reservoirs who could not justify the construction of their own pipelines. As with oil, the UK will need every whiff of gas available. Whatever happens, some new gas pipeline system will be required, and soon.

Additional material by David Marsh and William Hall.

MEN AND MATTERS

Pan Am puts its Ed in the air

"I have talked to Cunard Lines and told them that I was interested in a job as captain of the Titanic, and they informed me I was 50 years too late. Not having that challenge available, I decided to try one comparable to that, and so I am accepting the chairmanship of a company called Pan American World Airways."

Thus C. Edward Acker, explaining to a group of New York analysts shortly after his appointment last week how he gained his wings as chairman of the troubled airline group.

Acker swoops in from Air Florida, where he became chairman in 1977. A 52-year-old Texan, he has a reputation for a high-pressure, even feverish, work-tempo, reflected in the growth over which he presided at his former company.

Working with founder and president Eli Timoner, Acker took Air Florida up from a 1977 net loss of $2.2m to 1980 net profits of $5.07m. From serving a handful of Florida cities with propeller-driven aircraft, it expanded operations into other parts of the U.S., the Caribbean, Latin America and Europe with a 23-jet fleet.

Acker's approach combined low fares, fuel-economical jets and an adventurous approach to promising markets. He took Air Florida into head-on competition with Pan Am and Laker on the Gatwick-Miami route in spring this year, having already shown himself something of a pioneer in the bargain basement ticket stakes. In 1978, he launched perhaps the ultimate in cheap travel by offering round trips from Miami to Nassau for which not only was the ticket free, but passengers were paid one dollar apiece to fly.

While not every Air Florida passenger has benefited from quite such generous terms, Acker has continued to pack them in. In June this year, the airline carried 225,728 passengers, against 131,887 in the same month a year earlier.

Not surprisingly, other airlines began to take a keen interest in the record of the one-time Dallas investment counsellor who entered the aviation business by engineering a financial package for Braniff 17 years ago.

In accepting the summons from Pan Am, Acker takes on a daunting task. The airline lost $217.6m in the first half of this year, contributing to a cash squeeze which has forced the sell-off of its profitable Inter-continental Hotels subsidiary to Sir Maxwell Joseph's Grand Metropolitan.

Acker is putting on a brave face. "I've always thought of Pan Am as the epitome of the business, and that its chairman would have an exciting job in good times or bad," he says. That turn of phrase is echoed by outgoing chairman William Seawell in his salute to the new man—"Acker's ability to lead a company in both good and bad times, his natural capability for strong employee leadership and his proven track record for posting healthy growth in revenues and profits have demonstrated to us that he is the person for the job."

Over the Hill

"Hang on to a policeman—but don't touch the tender parts" sang out the master of ceremonies on the stage beneath the Westway as the Notting Hill carnival got into its swing on Sunday afternoon. And for the weekend of festivities, the dictum was well observed. Enough revellers hung on to policemen to provide the ritual shots for the fluttering shutters of passing cameras—and both parties kept diplomatically and peacably away from each other's tender parts.

Thinner crowds meant a higher proportion of Notting Hill locals than in previous years, with few streets more crowded than those of the West End on a busy shopping day. Off the main Portobello Green and Powis Square areas, the carnival was more a coincidence of street parties, with nobody much hanging around to listen to the booming sound systems except the neighbours—who, for once in the year, could not really have complained even had they wanted to.

Monday's crowd was again less dense than expected, but thick around the mile-long processional route down which plinked and plonked, hours behind schedule, the bands and chanters resplendent in feathered head-dresses, cobra masks and bumble-bee suits. Commercial sponsors were few, though BAT's du Maurier colours were sported by top steel band the Desperados.

Beer was sold at surprisingly reasonable prices, at least beneath the Westway arches where squats still survive in an increasingly gentrified neighbourhood, while salt fish and other soul food was dispensed by street-corner entrepreneurs often equipped with no more than a washing-up bowl and a window-ledge as point-of-sale fitments.

The police had time and space in which to enjoy themselves, wandering around in pairs with unstudied casualness — though the paucity of the crowd gave them perhaps a higher visibility than might have been expected. The helmets came off, the toddlers were hoisted aboard.

A coach parked near Ladbroke Grove police station bore the engaging windscreen sticker "Albanian Premier Tours" though Enver Hoxha was not in fact to be seen; a woman sang on the corner of Elgin Crescent with a lavatory seat around her neck. And that, in a troubled year, was a blessedly peaceful carnival.

"It's very hard to break the Bank Holiday habit!"

Hopping off

An executive perk has become an occupational hazard in the eyes of top American brewer Anheuser-Busch, which has ordered its managers to stop drinking their product on the job. The firm's explanation is that the move is in the interests of modern business decorum, and the need for "an environment that is more conducive to modern business practices."

But while it may be that in the company's eyes a six-pack of Budweiser may no longer be the ideal decoration for an executive desk, managers are by no means being asked to eschew the brew entirely. They will be allowed to take home two free cases of beer each month—so long as they agree not to sell it.

There are suggestions, however, that the concession may not be enough to still unrest fermenting among dry-mouthed employees. "Taking it away is like taking crosses out of churches," one anonymous manager fizzed.

Plump sum

"Sixty per cent of business executives are overweight—and they've got the figures to prove it."

SOUTHERN AFRICA

The view from inside the laager

By J. D. F. Jones, Johannesburg Correspondent

HOT PURSUIT or cold and calculated realpolitik? The latest South African venture into Angola has spotlighted the dangerous front line between the White supremacist republic and its sovereign black neighbours to the north. It should be seen in the context not just of the extraordinarily protracted diplomatic negotiations about the future of Namibia (where the South African generals may or may not think they are pursuing diplomacy by other means) but of the tense and tangled network which carries South African influence far into Africa through transport, investment, food supplies, and trade (last year the Republic exported R1,100m to over 40 countries).

With Zimbabwe independence last year African decolonisation reached the republic's border at the Limpopo; the *principle* of an independent Namibia had been agreed by the South Africans in the mid-1970s. They are committed to their *Bantustan policy* of granting "independence" to tribal homeland *states* inside their frontiers in an attempt to meet the aspirations of their *own* 20m blacks. In a word, the laager has been well and truly closed. There is nowhere now for White Africa to retreat, except into the sea.

Their strategy has therefore had to be rethought—a process that is very much going on at this moment. It is important to appreciate that policy in Pretoria is not yet clear. There seem to be various strands of opinion within the white Government and the debate continues about foreign policy just as there is a well known battle over domestic policy between "verligte" and "verkrampte," *enlightened and reactionary*, reformist and conservative.

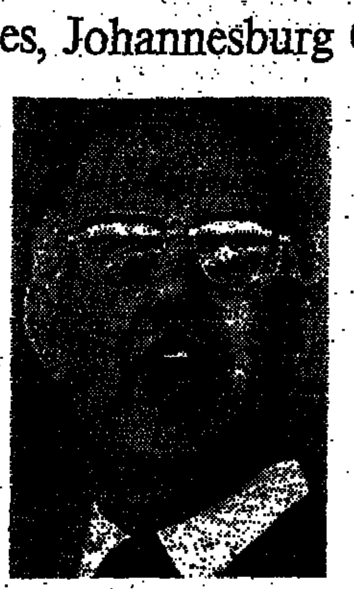
The essence of the argument can be put very simply: is it, or is it not, in the interests of South Africa *to have a successful*, orderly, even prosperous, black Africa *emerge on* its frontiers?

One the *one hand, it can be* argued that so long as the black African *states are anarchic and* poverty stricken, then white South Africans *can sleep more* securely at night. The opposite view (*and this is held by* not a few South Africans) is that the Republic's *prospect of* surviving the 20th century can only be enhanced *by the emergence* of a stable regional system in which the *enormous resources* of South Africa can be sent north to an *expanding market.*

This debate within the country is *not over yet, but it looks* as if the negative view is winning.

If that is true, then South Africa will be tempted to undermine Black Africa. And the fact that black African leaders are now convinced as never before than South Africa is trying to "destabilise" the front-line states. Seen in this context, the recent events in Angola would be merely the most extreme manifestation of a much wider policy.

In *Mozambique*, for example, the Frelimo government for all its Marxist ideology has on the surface had no difficulty in co-existing *with* Pretoria. There has for example been South *African help in running* the port of Maputo, which of course *is a major outlet for* South African trade. However, *Frelimo's authority* in its own territory is now under significant *strain, not just because of* its perilous economic situation *but because of the activities of* the Mozambique Resistance Movement (MRM)—*and it is*



P. W. BOTHA: dilemma

widely believed in Southern Africa that the MRM is supported, *indeed sustained*, by Pretoria.

So far as can be seen, the MRM consists of at least 6,000 dissidents, well enough organised, trained and supplied to be able to challenge Frelimo's writ in large areas of western and northern Mozambique.

Leadership is unclear but is rumoured to connect back to various shadowy figures, including European businessmen, who were active before the Portuguese withdrew. The MRM was definitely supported by the Rhodesian army of Mr Ian Smith during its war against the *Mozambique*-based Zanla guerrilla army of Mr Robert Mugabe. Today, it is constantly alleged that the MRM enjoys training facilities in South Africa, help from South African specalist personnel, and military supplies from the Republic.

No one believes that the MRM is about to confront Mr Samora *Machel's government in Maputo* but it is undeniably a "destabilising" *element. Gun fire is* regularly heard along the mountainous border with Zimbabwe: refugees are still coming across: last weekend the port of Beira was without electricity and water after what seems to have been an MRM sabotage operation: and—most important of all—the MRM is undoubtedly in a position to threaten the pipeline and the railway which link Zimbabwe to the sea from Umtali to Beira.

And it is in Zimbabwe where South African Assistance to the MRM, if true, would make best strategic sense, because the new Zimbabwe, led by Robert Mugabe, is South Africa's biggest worry. To most observers, the emergence of Mugabe and the Zanu-PF government in Salisbury, while unexpected, was not unencouraging

To the South Africans the "*Marxist*" Mugabe is still the devil incarnate. To make things *worse, he and his ministers* have kept up a barrage of vocal abuse *of Pretoria (while doing little* to reinforce this abuse with action). The result has been a serious decline in relations between two countries which are intimately linked economically. South Africa has brought in a range of measures (eg, termination of the preferential trade agreement, withdrawal of valuable railway locomotives, repatriation of Zimbabwe workers, etc) which are damaging to Mugabe. Zimbabweans for their part are absolutely convinced that South Africa is actively determined to "destabilise" their new country.

Again, the facts are hard to pin down. Are the South Africans training guerrillas in the *northern Transvaal?* Was it the South Africans who stole *important weaponry from a* Salisbury barracks—and did they transfer it to the MRM? Were the South Africans responsible for the recent assassination of a senior ANC official based in Salisbury? Who has been setting off bombs with a symbolic or nuisance value? Have the South Africans infiltrated Zimbabwe's military and civil structures? Is Zimbabwe's desperate shortage of diesel oil the result of a deliberate South African squeeze?

Categorical answers are hard to establish, but it is easy to see why the Zimbabweans feel nervous. They find themselves bang in the front line. They can see that the emergence of a prosperous, peaceful and multiracial Zimbabwe would, merely by example, represent a challenge to South Africa's ideology and system. They can work out for *themselves* that they are appallingly vulnerable to South *African interference.*

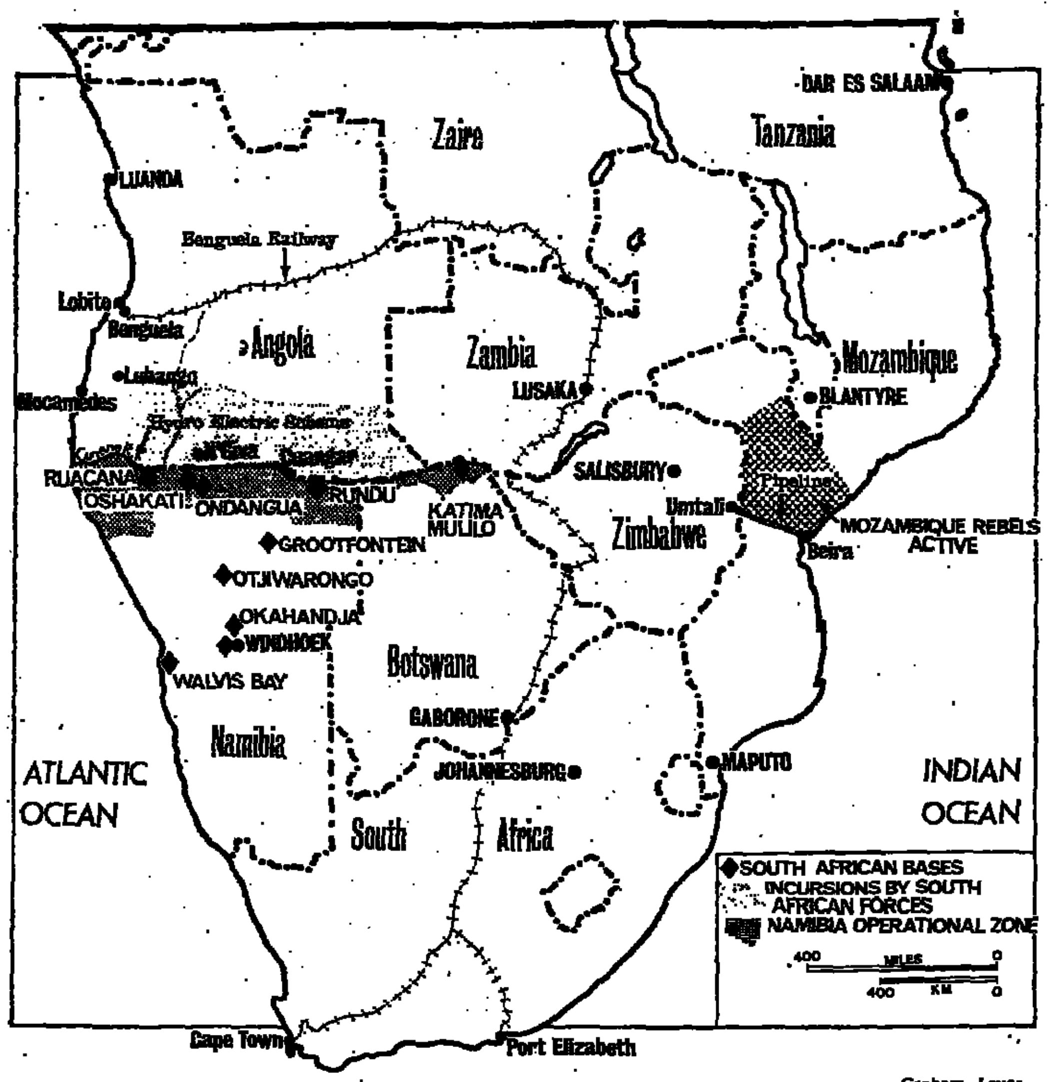
To take just two examples. *First, if diesel oil, which comes* from South Africa, is short, the Zimbabweans cannot move their record maize harvest: not only do they lose the valuable foreign exchange but they also forfeit their potential role as a major food supplier in Africa —and the "politics of food" cannot be underestimated. Secondly, there is the pipeline to Beira which Mr Mugabe has publicly said will bring in all of Zimbabwe's oil supplies by the end of this year. The MRM sits on the pipeline rather as the Unita dissidents of Jonas Savimbi sit across the Benguela railway that links Central *Africa to the Angolan Atlantic.*

Of the other regional states, Botswana, Lesotho and Swaziland, the former British protectorates, are, too, utterly economic hostages of the South African system, and too conservatively ruled, to have much of a role. Zambia, for all its radical protestations relies on *the south for vital supplies for* its mining industry, and also *for transport outlets. Still,* President Kaunda last October accused South Africa of being behind an attempted coup. In Malawi the South African influence is considerable and Pretoria's tentacles extend even into Zaire.

However, these regional black states are now taking steps to join together so as to reduce their economic dependence on South Africa. The Southern African Development Co-ordination Conference (SADCC) comprises nine members, with Zimbabwe playing a central role. It is therefore a *direct* competitor to Pretoria's regional *plan for a "constellation of* states" which was intended to include (*and therefore* legitimise) the Bantustans plus Namibia and eventually some of the independent black states. Zimbabwe's rejection of this "constellation" has been particularly damaging to the South African plan and today the atmosphere in Pretoria is a long way from John Vorster's vision of detente.

Where then does the military operation in Angola leave Namibia? Pretoria apparently still believes there is room for a non-radical Namibia, in which the claims of SWAPO to over*whelming popular support will* have been deflated at an inter*nationally supervised* election and the long efforts of the five-nation Western contact group will have brought international recognition.

As the South African troops withdraw from southern Angola the Contact Group must be surveying the scene ruefully. The only comfort they may like to take is that the Rhodesians, two years ago, carried out some of their most punitive expenditions into Mozambique and Zambia even while they were preparing to meet their sworn enemies across the conference table at Lancaster House.



Graham Lever

Letters to the Editor

Exchange rates

From Mr M. Spencer

Sir,—As a participant in the foreign exchange markets, I found Anatole Kaletsky's interview of Professor Reddaway (August 27) very interesting. I *believe it reflects an economist's* misunderstanding of the marketplace. *Professor Reddaway's* primary argument is that the Government *should take direct* steps to lower the sterling exchange rate to improve UK competitiveness.

Besides the fact that past devaluation policies by successive administrations in the 1960s and 1970s completely failed to *achieve any positive success* (other than import inflation), Professor Reddaway overlooks the simple fact that the price of sterling reflects the collective judgment of the marketplace about the likely long term level of UK inflation, balance of payments and economic stability. Other shorter term factors like interest rates obviously also play a major part. Previous attempts by Governments to artificially influence exchange rates (either by holding them up or pushing them down) have almost always failed. Official intervention is usually a *signal* to foreign exchange market traders to take the opposite view and make some easy money. The *only way that any* Government could succeed in *lowering the exchange rate* permanently (as opposed to temporarily) is to convince the market that its long term inflation rate and long term output, balance of payments is deteriorating. Presumably this is not a desired objective.

Incidentally, Professor Reddaway fails to observe that sterling has weakened considerably this year. In trade weighted terms the pound is back to the same level that prevailed in late 1979/early 1980. On balance I believe the free market should be allowed to determine price. In the *long run, markets* are always "right." Economists and Governments less often so.

Michael Spencer,
Conti Commodity Services,
World Trade Centre, E1.

Executive pay

From Mr D. Lee

Sir,—It would appear from *recent reports* that wage settlements are now being negotiated and *settled* at more realistic levels linked to productivity. This new *realism*, however, could be jeopardised by the excessive increases in remuneration which the directors and management of a number *of* public companies have awarded themselves as disclosed in relevant accounts. These increases, in my opinion, amount to an abuse of their fiduciary position by the directors concerned because in a number of instances they only have a minimal equity interest and the companies have incurred losses or a *substantial* reduction in profits so that a decrease rather than an *increase* in remuneration would be more appropriate.

The directors concerned *may* plead that the remuneration is justified by their responsibilities but my answer is that the prestige of their *office and* its attendant perquisites are *adequate reward*. The financial stability of their company with just rewards for all its employees should be their principal motivation, not greed, bearing in mind the maxim "from each according to his ability, to each according to his needs."

The problem could probably be solved by penal taxation on high earnings. My proposal would be, in the ease of people who earned in excess of £20,000 per annum in 1980-81, which is an adequate income by any standards, to impose taxation at rates of up to 100 per cent by which their income in 1981-1982 exceeded the 1980-81 figure. There will no doubt be an outcry that incentive would be destroyed but in these times incentive appears to be a euphemism for greed.

David E. Lee.
24, Corbins Lane, South Harrow.

Garbled message

From the Managing Director, Penta Reading.

Sir,—The other morning I followed a car carrying a rear window sticker saying "Create Jobs—Sack the Tories." The car? A Russian-built Lada the importation of which probably cost UK manufacturing industry 25 jobs.

A. A. A. Stammers.
Penta House,
Basingstoke Road, Reading.

Full audited accounts

From the Assistant General Manager—Underwriting, Trade Indemnity Company

Sir,—Mr Nicholas Baker, MP (August 25) advocates the exemption of small companies from the necessity of preparing full audited accounts, and criticises the *Government's decision* not to take advantage of the *exemptions* permitted by the fourth directive.

In registering a limited company—large, medium or small—a businessman claims the right to limit his liabilities to the equity put into the company—usually in the form of the paid-up capital and represented by the assets of the company. For this considerable concession, he should show some business responsibility which, in part, should be evidenced by an ability to produce proper books of account. Mr Baker is merely encouraging inefficient administration.

Mr Baker welcomes the proposals *to* relax the statutory disclosure requirements for small *businesses*, believing that they have been at a disadvantage when *compared* with larger organisations. Yet all companies, great and *small*, need financial help from their suppliers—without supplier *credit* they would not survive. Any creditworthy company *should* have nothing to hide or fear from publishing audited financial information—indeed it should be to its advantage. To *say* that such disclosure is an unfair imposition on a small company because larger competitors can use such information against it, is doubtful. By the time such details are published and available at Compaines House, they would have no real value to a competitor.

Mr. Baker is probably *unaware that our present* Companies House registration *system is the envy of traders* all over the world. What a pity *to advocate the reduction of* such standards and thereby *encourage inefficient businesses.*

Dennis L. Howson,
Trade Indemnity House,
12-34, Great Eastern Street, EC2.

Treasury thinking

From Mr A. Ham.

Sir,—I should like to correct two errors in Peter Riddell's review of my book (Lombard, August 26).

It is made clear in my book that there has been nothing monolithic about Treasury thinking since the war. I explained, for instance, that it was the benign Keynesians in the Treasury who recommended the expansionist policy which came to grief in 1976. It was after that policy had failed that monetarism gained respectability, partly because Denis Healey paid it a measure of lip *service. He was, of course,* far too intelligent to apply it blindly *or take it very seriously. It* was the incoming Conservative *politicians who made the great* leap of faith. But I believe the social outlook at the *Treasury* made many officials reasonably disposed to "teach organised labour a lesson," with deflation. After all, none of them will be held accountable for the dismal failure which has met the new policies, nor suffer personally.

If Mr Riddell had been reading "Economic Trends" closely over the past year, or various Central Statistical Office press releases, he would know that in Britain, since early 1979, we have experienced falling national income and industrial output on a scale quite comparable with the slump of the 1930s. On the preliminary figure *published on August 18, GDP* had fallen 7.8 per cent from the second quarter *of* 1979 *to* the second quarter of 1981.

A. C. G. Ham.
"Westwinds,"
Chapel Lane,
Ratley, Banbury.

Chipboard imports

From the Director-General, UK Particleboard Association.

Sir,—Mark Meredith's sympathetic report on chipboard industry problems (August 21) was *quick off the mark in* relation to certain recent events, *and perhaps inevitably* contained some factual inaccuracies: *It is, however, of course* true that we claim serious injury from the lowest import prices and from excessive low-priced import penetration. Uneconomic pricing of our product is chronic, although of course at its worst in a time of recession: there are always too many exporters from 20 countries competing without restraint on our wide open market.

Many industries can say the same. *In our case*, "protectionism" is not involved, in the *sense in which the word is too* glibly used by those who have other eggs to fry. On present evidence, we are *an industry* with the technical and technological *know-how* and the readily-available raw materials to develop *to twice our present* size, which would still leave plenty of *room for quality* imports to compete for a third of the market.

Some chipboard is imported *for the reason that particular* types are required for certain *applications. Apart from this,* we see no good reason why this *country should be a magnet for* the surplus and under-priced *production of developed* countries.

What is urgently needed is a whole new EEC fair trading policy in favour of minority national sectors of EEC industries where the national sector's development is impeded only by a failure of realism on the part of the fair trading rules. This country should be far more interested than it *apparently is in the root causes* of its adverse balances in em*ployment, economic returns for* investment, and the extension *of consumer service through* technological advance. The damage being inflicted by wishful and apathetic policies, above all as regards monopoly-inflicted costs and definition of dumping injury, is incalculable.

David G. Duke-Evans.
4th Floor, East Wing,
29, St. James's Street, SW1.

Power of the Press

From Barbara Simpson.

Sir,—It is amazing what an article in your paper can do for a small firm such as ourselves. Since you wrote about us on August 18, our phone has not stopped ringing, and apart from enquiries *we* have had a very large order from America, another from South Africa, and unbelievably an offer from a retired American oil magnate to invest $3m in us!

Obviously the answer to Britain's industrial troubles is for you to write more features on small companies, such as ourselves, and wait for the offers to pour in!

Barbara Simpson.
Gostin of Liverpool
Yew Tree House Farm,
Almond Close,
High Road, Halewood,
Liverpool.

Postal profit

From the Managing Director, Postal Services, Post Office

Sir,—The postal and National Girobank businesses will not be deprived of subsidies from telecommunications' activities, as you report (August 27), for the simple reason that they do not receive any such subsidy.

The profit returned by the postal business for the fifth successive year and the before tax profit of National Girobank were achieved entirely by their own efforts. This contrasts with other postal services in the developed world, most of which are loss-making or depend on some form of assistance from telecommunications or the state.

Charles E. Beauchamp,
Headquarters Building,
St Martins le Grand, EC1.

Today's Events

GENERAL

UK: Trades Union Congress leaders meet Mrs Margaret Thatcher for talks on the regeneration of inner cities, at 10 Downing Street.

Lothian Regional Council meets to discuss public expenditure.

British Association for the Advancement of Science conference opens, York (until September 4).

Health Service complaints procedure *introduced.*

Barclays Bank introduces charges on cheques cashed by other banks' clients.

Oracle teletext service starts to carry advertising.

Viscount Slim opens exhibition of war and philately, Stanley Gibbons Gallery, WC2 (*until* September 30).

Overseas: Mr David Howell, Energy Secretary, starts five-day visit to Japan for discussions on prospects for closer collaboration on energy matters and the scope for increasing UK energy exports—meets Mr Tanaka, Japanese Energy Minister.

King Birendra of Nepal addresses UN conference on least developed countries, Paris (conference continues to September 14).

OFFICIAL STATISTICS

Confederation of British Industry publishes its monthly trends inquiry for August.

COMPANY MEETINGS

See week's Financial Diary on Page 20.

COMPANY RESULTS

Final dividends: Diplome. Gresham Investment Trust. R. and J. Pullman. **Interim dividends:** H. Brammer. British Vita. *Invergordon Distillers* (Holdings). Macfarlane Group (Clansman). Trade Indemnity.

LUNCHTIME MUSIC, London

Organ recital by Margaret Phillips, St. Lawrence Jewry, Gresham Street, 1.0 pm.

Organ recital, St. Botolph Aldgate, 1.05 pm.

G. Armitage first-half profit slump

Sales of engineering and facing bricks fell from £5.04m to £4.12m at George Armitage and Sons, and the taxable surplus dropped to a near break-even £28,000, for the first half of 1981, compared with £502,000.

Mr Geoffrey Armitage, the chairman, says that it is impossible to forecast the full year's outcome.

He explains that the principal source of encouragement at present lies in a modest increase in enquiries for acid-resisting ware, particularly from overseas, but as long as the current UK economic climate prevails, brick demand will remain at a low level, accompanied by low profit margins.

Struck after an exceptional debit of £203,000, pre-tax profits for the whole of 1980 were £504,000.

The interim dividend is maintained at 2.5p per share, payable October 1, and the directors hope to pay the same final as last year, of 5p. Mr Armitage warns that a decision will be dependent not only on the year's results, but also on the longer term economic outlook.

The chairman says that the substantial drop in brick demand, in the first half, resulted in unprecedented price competition, particularly in engineering bricks where prices realised were materially lower than last year.

"Every effort has been made to contain costs but these have risen, although remaining within our internal budget."

Stocks at the Whinney Hill works, Accrington, are being steadily reduced. At June 30 last group stocks amounted to the equivalent of 17 weeks' production, but must be viewed against a background of full production being maintained, apart from the closure of Whinney Hill, Mr Armitage states.

Cash flow has been considerably improved, following the receipt of £1.7m by the Accrington Brick and Tile Company for the granting of a long-term lease over a large part of its worked-out quarry, and £200,000 by the parent from the sales of a small area of land which was surplus to requirements, and a quarry.

These items are shown as a £1.19m (£101,000) after-tax extraordinary credit for the six months which, after preference dividends of £33,000, boosts the available balance to £1.19m (£309,000)—there was no tax (£261,000).

Expenditure amounting to £300,000 has been authorised for the construction of a hearth kiln and associated equipment at Accrington.

Armitage is a privately-held company with close status.

Polymark reasonably confident

FOR 1981 Mr Peter Meyer, chairman of Polymark International tells members he is reasonably confident that profits, particularly during the second half, will improve on 1980.

For the longer-term the group's investments in research and development and productive resources, as well as its strong market position internationally, emphasise the directors' continued expectation of future growth, he says in his annual statement.

As reported on July 1, the company, which supplies machinery to laundries and clothing manufacturers, and distributes agricultural and horticultural equipment in France and Germany, saw its pre-tax profits fall from £1.58m to £665,178 for 1980, on turnover of £20.34m (£19.27m). The dividend is being held at 3.7p net per share with a same-again final of 1.9p.

Alfred Preedy back on growth path

ALTHOUGH Christmas trading is again likely to be difficult, with keen competition in toys and confectionery, Mr S. L. Preedy, chairman of wholesale and retail tobacconist Alfred Preedy and Sons, is confident the group is back on a path of growth in profits.

As reported on August 4, profits before tax for the year to March 28 1981 amounted to £974,000. In 1979-80, the surplus fell to £843,000 after holding steady at £1.2m for the previous two years.

Mr Preedy says that the bulk of savings in costs have now been completed, and the benefits of this and other rationalisation measures should be reflected in the current year's first-half results.

Recent hefty increases in the prices of cigarettes and tobacco caused some disruption, he adds, but by careful positioning in the market place the group hopes to maintain their contribution to profits.

With other products, the pattern is similar to last year, although the group's china and glass shops were very busy in the weeks before the Royal wedding.

Fixed assets at the year end amounted to £8.82m (£9.34m). Net current assets were up from £2.77m to £3.42m, including cash and bank balances of £351,000 (£203,000) and overdrafts and loans repayable within one year of £2.42m (£0.93m). Shareholders' funds were £10.8m (£10.37m) and term loans reduced from £2.45m to £2.24m.

Meeting, Tipton, September 24 at 5.45 pm.

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the sub-divisions shown below are based mainly on last year's timetable.

TODAY

Interims—H. Brammer, British Vita, Macfarlane (Clansman), Trade Indemnity.

Finals—Diploma, Gresham Investment Trust, R. and J. Pullman.

FUTURE DATES

Interims—

Babcock International	†Sept. 2
Bridon	Sept. 10
Cement-Roadstone	Sept. 2
Jersey Electricity	Sept. 28
London and Holyrood Trust	Sept. 17
London and Prov. Trust	Sept. 17
Menzies (John)	Sept. 22
Quick (H. and J.)	Sept. 3
Spencer (George)	Sept. 15
Wilson (Connolly)	Sept. 9

Finals—

British Electric Traction	Sept. 3
Copson (F.)	Sept. 3
Elder Smith Goldsbrough Mort	Sept. 15
Hewitt (J.) (Fenton)	Sept. 16

† Corrected.

Inchcape in franchise deal with Toyota

Inchcape Berhad, the Singapore-based subsidiary of Inchcape of the UK, is taking an equal minority stake with Toyota in a new company to control the franchise for the Japanese motor group's products in Malaysia.

The new company, of which Inchcape and Toyota will each hold 7.5 per cent, will acquire Inchcape's motor assembly and manufacturing operations. Toyota's present Malaysian distributors, Borneo Motors (Malaysia) and NBT (Sabah) and NBT (Sarawak) will continue retail operations for the company.

The proposals will become effective on January 1 1982 and will not therefore affect Inchcape's results this year, in the first half of which pre-tax profits have fallen from S$59.38m to S27.23m.

The directors of the group say that, as expected, the current year is proving difficult. Motor sales are down and profits depressed further by lower margins and the strength of the yen earlier on. The timber business continues to be unprofitable

They expect profits for the remainder of the year to show an improvement over the first half, but are cutting the interim dividend from 10 per cent to 7.5 per cent.

London listing for Alcoa

THE STOCK of Aluminium Company of America (Alcoa), is to be listed on the London Stock Exchange. Mr W. H. K. George, chairman and chief executive, described the UK listing as "an important milestone for Alcoa."

"London is a major centre in the Western world for business, finance and commerce. We intend that the listing of Alcoa common stock will be a signal to the business and financial communities that we are very serious about our international presence."

The company, which is the world's leading producer of aluminium products produced net income in the first half of 1981 amounting to $182.6m. In 1980 Alcoa showed net income totalling $469.9m compared with $504.6m for 1979. Dividends for the first half of this year amounted to $0.90 per common share. For the previous full year $1.60 was paid.

Commenting on the first half figures Mr George says that sales and operating revenues were slightly higher than the 1980 period, with improved prices on most products being partially offset by lower shipments. Costs have increased faster than prices and the softening of various markets has not allowed the company to pass along all its cost increases to its customers.

The gradual upturn that the company had been anticipating for the second half of this year has moved out beyond 1981, mainly because of a slower than expected rebound in the economy, continued high interest rates in the U.S. and an economic slowdown in the rest of the world.

The directors expect that aluminium shipments in the second half of the current year will be below the level of the first six months.

T & N sells Italian offshoot

Compagnie Industriali Riunite SPA (CIR) of Italy, has acquired an Italian-based filter manufacturing subsidiary from Turner and Newall of the UK.

Terms of the transaction are not disclosed.

CIR says the purchase of Coopers Fiaam SPA, a leading Italian maker of oil and air filters for the automotive and industrial sectors, is part of its plan to develop new activities in fuel-saving technology and pollution control.

The group adds that the development plans also include a technology and commercial co-operation agreement with an unidentified U.S. company.

The Mantua-based filter maker, whose name will be changed to Fiaam SPA, has more than tripled turnover to L30bn and doubled personnel in the last few years, CIR states.

OFREX INTERIM

The interim dividend from Ofrex Group is being held at 1.17p net for the year 1981. In Friday's edition it was inadvertently reported that the current payment was being raised to 1.75p.

BASE LENDING RATES

A.B.N. Bank	12 %	■ Guinness Mahon	12 %
Allied Irish Bank	12 %	■ Hambros Bank	12 %
American Express Bk.	12 %	Heritable & Gen. Trust	12 %
Amro Bank	12 %	■ Hill Samuel	§12 %
Henry Ansbacher	12 %	C. Hoare & Co.	†12 %
AP Bank Ltd.	12 %	Hongkong & Shanghai	12 %
■ Arbuthnot Latham	12 %	Knowsley & Co. Ltd	12½%
Associates Cap. Corp	12 %	Langris Trust Ltd.	12 %
Banco de Bilbao	12 %	Lloyds Bank	12 %
BCCI	12 %	Mallinhall Limited	12 %
Bank of Cyprus	12 %	Edward Manson & Co.	13 %
Bank of N.S.W.	12 %	Midland Bank	12 %
Banque Belge Ltd.	12 %	■ Samuel Montagu	12 %
Banque du Rhone et de la Tamise S.A.	12½%	■ Morgan Grenfell	13 %
Barclays Bank	12 %	National Westminster	12 %
Beneficial Trust Ltd.	13 %	Norwich General Trust	12 %
Bremar Holdings Ltd.	13 %	P. S. Refson & Co.	12 %
Bristol & West Invests.	13 %	Slavenburg's Bank	12 %
Brit. Bank of Mid. East	12 %	E. S. Schwab	13 %
■ Brown Shipley	12½%	Standard Chartered	‖12 %
Canada Perm't Trust	13 %	Trade Dev. Bank	12 %
Cayzer Ltd.	12 %	Trustee Savings Bank	12 %
Cedar Holdings	12 %	TCB Ltd.	12 %
■ Charterhouse Japhet	12 %	United Bank of Kuwait	12 %
Choulartons	12 %	Whiteaway Laidlaw	12½%
C. E. Coates	12 %	Williams & Glyn's	12 %
Consolidated Credits	12 %	Wintrust Secs. Ltd.	12 %
Co-operative Bank	*12 %	Yorkshire Bank	12 %
Corinthian Secs.	12 %		
The Cyprus Popular Bk.	12 %		
Duncan Lawrie	12 %		
Eagil Trust	12 %		
E. T. Trust Limited	12 %		
First Nat. Fin. Corp.	15 %		
First Nat. Secs. Ltd.	15 %		
Robert Fraser	12 %		
Antony Gibbs	12 %		
Grindlays Bank	‡12 %		

■ Members of the Accepting Houses Committee.

* 7-day deposits 9%, 1-month 9¼%. Short term £4,000/12 months 11.85%.

† 7-day deposits on sums of £10,000 and under 9%, up to £50,000 10% and over £50,000 11%.

‡ Call deposits £1,000 and over 9%.

§ Demand deposits 9½%.

‖ 21-day deposits over £1,000 10½%.

FT Share Information

The following securities have been added to the Share Information Service:—

Allied Residential (Section: Buildings). ICC Oil Services (Oil and Gas). Kalbara Mining (Mines—Australian). Western Continental (Mines—Australian).

SPAIN

August 28	Price %	+ or −
Banco Bilbao	367	
Banco Central	392	
Banco Exterior	418	
Banco Hispano	341	
Banco Ind. Cat.	121	
Banco Santander	402	
Banco Urquijo	226	
Banco Vizcaya	389	
Banco Zaragoza	264	
Dragados	223	
Espanola Zinc	80	
Fecsa	72.7	
Gal. Preciados	65	
Hidrola	86.5	
Iberduero	58	
Petroleos	125.2	
Petroliber	84	
Sogefisa	54	
Telefonica	86.5	
Union Elect.	79.5	

EUROPEAN OPTIONS EXCHANGE

Series		Nov. Vol.	Nov. Last	Feb. Vol.	Feb. Last	May Vol.	May Last	Stock
GOLD C	$400	4	45	—	—	—	—	$428.50
GOLD C	$425	38	30 A	2	47 A	—	—	"
GOLD C	$450	10	18 A	—	—	6	52 A	"
GOLD C	$475	11	9.50	—	—	—	—	"
GOLD C	$500	40	6	11	16 A	—	—	"
GOLD C	$550	3	2.50 A	—	—	—	—	"
GOLD P	$400	1	10	5	12	—	—	"
GOLD P	$425	11	19	—	—	4	20 B	"
GOLD P	$450	101	28 B	—	—	—	—	"
GOLD P	$475	—	—	1	47 B	—	—	"
		Oct.		Jan.		April		
ABN C	F.300	11	8	—	—	—	—	F.295
ABN C	F.320	5	2.20	—	—	—	—	"
AKZO C	F.22.50	—	—	100	5	—	—	F.24.20
AKZO C	F.25	50	1	12	2.80	7	3.40	"
AKZO C	F.27.50	—	—	38	1.20	—	—	"
AKZO P	F.25	48	1.20	—	—	—	—	"
AKZO P	F.27.50	—	—	5	3.50	—	—	"
AMRO C	F.50	10	5	—	—	—	—	F.55
AMRO C	F.55	29	1.70	—	—	—	—	"
KODA C	$70	10	1⅛	—	—	—	—	F.66½
HEIN C	F.45	5	3.30	—	—	—	—	F.45
HEIN P	F.45	4	2.20	7	2.80	—	—	"
HEIN P	F.50	64	5.60 B	—	—	—	—	"
HOOG C	F.20	—	—	4	1.20	—	—	F.17
HOOG P	F.20	—	—	10	3.80	—	—	"
IBM C	$50	19	1⅛	—	—	—	—	$56
IBM C	$65	5	⅛	—	—	—	—	"
KLM C	F.100	10	12	—	—	—	—	F.104.50
KLM C	F.110	91	6.40	30	12.70	—	—	"
KLM C	F.120	7	5.30	14	8.50	—	—	"
KLM C	F.130	5	1.80	—	—	—	—	"
KLM C	F.140	—	—	30	4	—	—	"
KLM C	F.150	5	0.60	—	—	—	—	"
KLM P	F.80	10	0.80	—	—	—	—	"
KLM P	F.100	5	4.70	10	9	—	—	"
KLM P	F.130	5	28	—	—	—	—	"
NEDL C	F.140	7	17.50	17	21	—	—	F.152.30
NEDL C	F.150	19	10.50 B	—	—	—	—	"
NEDL C	F.160	8	6.30	—	—	—	—	"
NEDL C	F.170	9	3.50	—	—	—	—	"
NEDL C	F.180	5	1.80	—	—	—	—	"
NEDL P	F.150	42	6.30 B	—	—	—	—	"
NEDL P	F.160	12	11	—	—	—	—	"
NATN C	F.120	5	3.50	—	—	—	—	F.116.30
PHIL C	F.20	81	3.30	—	—	—	—	F.22.60
PHIL C	F.22.50	31	1.50	—	—	—	—	"
PHIL C	F.25	110	0.60	84	1.50	14	2.40 A	"
PHIL C	F.27.50	125	0.20	210	0.80	—	—	"
PHIL P	F.22.50	35	0.80	32	1.30	—	—	"
PHIL P	F.25	12	2.40	—	—	—	—	"
RD C	F.80	10	9.50 B	15	11	—	—	F.89.10
RD C	F.90	42	4.10	—	—	—	—	"
RD C	F.100	24	1.30	9	3	—	—	"
RD C	F.110	50	0.20	—	—	—	—	"
RD P	F.80	5	1.30	—	—	—	—	"

TOTAL VOLUME IN CONTRACTS 2180

A=Asked B=Bid C=Call P=Put

INTERNATIONAL CAPITAL MARKETS

U.S. BONDS

BY IAN HARGREAVES

Chase cut cheers the market

THE U.S. BOND market received a psychological boost yesterday when Chase Manhattan reduced its prime lending rate by half a full percentage point to 20 per cent. This was the first downward movement in the prime rate since the beginning of last month.

Coupled with the decline in the prime was an unexpectedly large drop in the weekly money supply figures last Friday with a $3.7bn fall in M1-B, the most widely watched weekly indicator. Wall Street had expected a decline of about $1.5bn.

All this helped the bond market to recover from what has been a black ten days for the U.S. credit markets. But despite yesterday's encouraging news, the market remains generally wary over the outlook in the longer term.

Indeed, Chase yesterday said its decision to reduce the prime was not necessarily a prediction of the future direction of rates. Rather it is a reflection of current market conditions. In the past few days, Fed funds have come down to around the 17 per cent range from the high levels of over 20 per cent of recent weeks. Moreover, major banks have been lowering their broker loan rates reflecting, as the prime move yesterday, the general decline in the banks' own cost for funds.

But the bond market continues to be worried by the treasury's voracious borrowing appetite and the Federal Reserve's policy. Mr Paul Volcker, the chairman of the Fed, said quite clearly on Sunday in a television interview that the Fed would maintain its tight policies.

The pessimists came in for the kill on Wall Street last week and a plucky rally on Friday on the strength of the drop in money supply and a lower Fed funds rate was not enough to shake them off their quarry.

The facts of the week were as follows: The consumer price index for July increased by 1.2 per cent, its sharpest monthly increase for 18 months; The July leading economic indicators fell by 0.1 per cent, thereby indicating very little.

In the bond market, Monday produced deep gloom, attributed to a hangover effect from the previous Friday's modestly bad money supply figures, but really more to do with longer range perceptions about the government borrowing requirement.

Why fears should have crystallised so suddenly about the budget deficit and borrowing requirement is a little puzzling, although it probably stemmed from a report of worries within the Office of Management and Budget on the subject. But for weeks previously, Wall Street experts had been scoffing at the Administration's $42bn deficit forecast, and even the Congressional Budget Office has supported a forecast of $60bn.

At any rate, bond traders decided on Monday morning that the medium-term outlook was black and, still struggling under high carrying costs because of the high short-term interest rates, sold the market. The next day came the CPI figures and things got worse.

Not a single corporate bond issue was priced in the week and there was hardly any activity in the shell-shocked municipal tax-free sector either. The Treasury sold five-year two-month notes at the incredible yield of 16.14 per cent.

Meanwhile the Federal Reserve, juggling to try to ease restrictions on M1B growth while reining in the broader M2, is in danger of running out of time before the impact of a tax cut which Mr Volcker always worried was premature.

The President chastised Wall Street again last week for over-reaction. Those inclined to agree with Mr Reagan point to the easier conditions in short rates generated last week by an easing of Fed pressures on the funds rate, to the fact that many Wall Street price economists disagree strongly with Dr Kaufman that inflation is again in danger of spiralling upwards, and that Friday's report on August producer prices is expected to show a modest 0.4 to 0.6 per cent increase.

But these seem minor details in a financial community increasingly absorbed with the thesis that it cannot regain stability or lower interest rates without either another miracle of spending restraint from Mr Reagan and Congress or a recession of such severity that it will knock for six those sectors of the economy which have already been in an interest rates slump for nearly two years.

CURRENT INTERNATIONAL BOND ISSUES

Borrowers	Amount m.	Maturity	Av. life. years	Coupon %	Prices	Lead manager	Offer yield %
U.S. DOLLARS							
†§Aida Engineering	20	1996	15	5¼	100	Yamaichi Securities	5.250
‡††CCCE (g'teed France)	100	1993	12	—	100	CCF. Caisse des Depots	—
‡††Industrias Resistol SA	40	1988	7	9Φ	100	Merrill Lynch, Cont. Illinois	9.203Φ
‡§Nippon Chemi-Con	25	1991	10	5	100	Nikko Secs (Europe)	5.000
§JACCS Co.	25	1996	15	5½	100	Yamaichi Securities	5.500
§Fujitsu Fanuc	50	1996	15	5	100	Nikko Secs. (Europe)	5.000
§Sumintomo Metal Inds.	50	1996	15	5¼	100	Kidder Peabody, Nomura, Daiwa, Sumitomo	5.250
†Korea First Bank	30	1989	—	7½Φ	100	Merrill Lynch, Chase Manhatten	7.641Φ
§Minolta Camera Co.	50	1996	15	5	100	Daiwa Securities	5.000
§Sanyo Electric	100	1996	15	5	100	Yamaichi Secs., Schroder Wagg, Noruma Intl., KFTCIC	5.000
‡EIB	100	1988	7	16½	100	UBS (Securities)	16.500
Cities Service Co.	150	1988	7	17	*	CSFB	*
§Tsumura Juntendo, Inc.	30	1996	15	5¼	100	Nikko Secs. (Europe)	5.250
D-MARKS							
‡Province of Quebec	150	1991	10	10¾	99	Commerzbank	10.919
SWISS FRANCS							
‡Gillette O/S Fin. Corp.	100	1991	—	7	100	Credit Suisse	7.000
‡Council of Europe	60	1991	—	7¾	99½	Banca del Gottardo	7.824
‡**Bundes Steiermark	15	1986	—	7⅝	100	UBS	7.625
‡EIB	100	1991	—	7½	100¼	Banque Gutzwiller	7.482
Phillips Lamps NV	100	1991	—	7½	*	Credit Suisse	*
‡**Kingdom of Belgium	100	1986	—	8	100	Kredietbank (Suisse)	8.000
YEN							
‡World Bank	30bn	1996	—	8.5	99.95	Nomura Intl.	8.687
SDRs							
†Ferrovie dello Stato	100	1985	4	5Φ	100	Dillon Read, Orion Royal Bank	5.062Φ
KUWAITI DINARS							
Swedish Export Credit	7	1986	5	10	*	KIIC	11½
ECUs							
Hydro-Quebec	40	1988	7	14½	*	Kredietbank Intl.	*

* Not yet priced. ‡ Final terms. ** Private placement. † Floating rate note. Φ Minimum. § Convertible.
†† Registered with U.S. Securities and Exchange Commission.
Note: Yields are calculated on AIBD basis.

U.S. INTEREST RATES (%)

	Week to Aug 28	Week to Aug 21
Fed Funds wkly avge	18.91	18.56
3-month Treas. bills	15.50	15.54
3-month CD	17.85	18.05
30-year Treas. bond	14.52	14.05
AAA utility	16.88	16.50
AA industrial	16.25	15.50
Visible supply Corp. bonds	$7.6bn	$7.2bn

Source: Salomon Bros, First Boston.

INTERNATIONAL BONDS

BY FRANCIS GHILES

Buyers are there at 17%

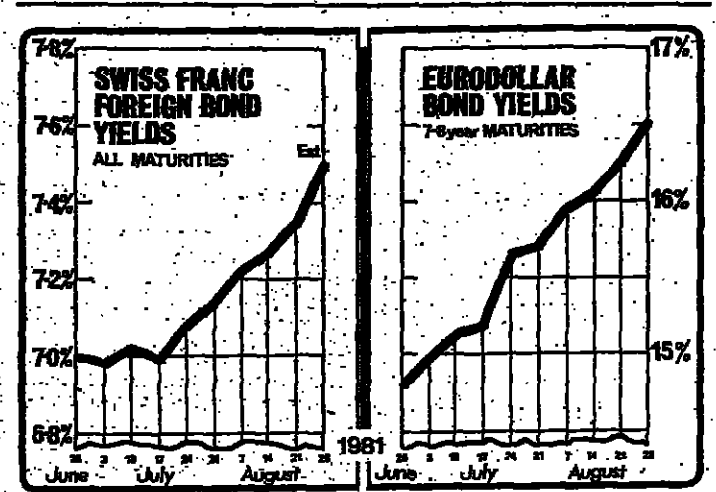
WHILE secondary market trading activity remained very thin in the major sectors of the Eurobond market last week, some optimism was derived by dealers in the dollar sector from the launching of a 17 per cent bond to 1988 for the U.S. oil company, Cities Service.

This is only the second time in its history that the market has witnessed so high a dollar coupon and the borrower this time round was more attractive to investors than Public Service of New Hampshire which launched a 17 per cent bond to 1986 earlier in August.

Demand for the new paper underlined once again that investors are willing to commit fresh funds to the market if they feel that the name of the borrower and the coupon he is paying are worthy of their attention. It also suggests borrowers are not all agreed in believing that U.S. interest rates will fall dramatically in the near future.

The yield on the new bond stands at 17.39 per cent, if the 1½ per cent selling group discount is taken into account and assuming that the issue is priced at 99¼. That is very close to the overdraft rate of Euroclear—the major bond clearing house—which was cut on Friday from 18¾ to 18½ per cent. The negative cost of carrying paper has been closing fast and many participants in the market are convinced that if a few more good names tapped the dollar sector offering investors as good a return the paper would be absorbed easily. However, few dealers and new issue managers are prepared to gamble on any early and dramatic decline in U.S. interest rates.

Fixed interest dollar bonds declined by ½ points last week. The new $100m issue for the EIB, a 16½ per cent bond to 1988, led by UBS (Securities) was oversubscribed, according to the manager, but some investment houses felt the terms were too tight for so prolific a borrower. They also feared that were the EIB to offer Yankee bonds in the U.S.—it filed a registration with the U.S. Securities and Exchange Commission in Washington earlier last week—investors may shortly be presented with an opportunity to buy higher yielding paper.



Five Japanese dollar denominated convertibles were announced last week. Older issues declined however, in line with the Tokyo Stock Exchange.

Any sharper fall in Tokyo could pose problems of digestion in the Eurobond market in view of the volume of such paper being arranged at present. Japanese dollar convertibles represented a quarter of all new dollar bonds in August. Managers of Japanese convertibles which were priced last week were however able to cut the coupons on the paper they were offering because of good demand. The convertible for Nippon Chemi-Con was increased by $5m to $25m.

CREDITS

BY FRANCIS GHILES

Pemex decides to go on a diet

MEXICO'S state oil company Pemex, is going on a diet. Last Friday it decided to put on ice one of the three loans it was trying to tie up in the international capital markets as confusion grew over its attempts to raise more than $1bn in three different operations.

Bank of Nova Scotia is thus not expected to proceed with the $200m loan for which it had been trying to put together a management group. This move should help speed up the completion of the $500m loan-bond hybrid financing for the Mexican borrower which is being arranged under the aegis of European Banking Company. EBC had found the gathering of managers rather slow on account of the two other loans being arranged for Pemex.

The third loan for the Mexican borrower, a £200m facility acceptance being arranged by Samuel Montagu, N. M. Rothschild, and Baring Brothers, is unaffected by last Friday's developments.

Meanwhile a $100m eight year "club" deal for the private Mexican borrower, Conductores Monterrey is being arranged with Orion Royal Bank acting as agent. The borrower is paying a split spread of 1¼ per cent for the first three years rising to 1⅜ per cent on a tranche of $49.2m. On the second tranche the borrower is paying a spread of 1⅜ per cent throughout.

Another rare appearance is that of Cuba which is arranging a FFr 57½m ten-year loan which carries a split spread of 1 per cent for the first five years rising to 1¼ per cent, through Societe Generale. This forms part of a larger package which includes FFr 400m worth of export credits in connection with the Matanzas power station.

Italy is expected back in the market imminently with a $500m seven-year loan which should carry a split spread of ½ per cent for the first five years rising to ⅝ per cent. The borrower will be Ferrovie dello Stato which had been widely anticipated to raise a similar amount through Dillon Read earlier this year. The terms are unchanged from those paid by major Italian State borrowers earlier this year.

A $135m five-year loan for the financial subsidiary of the State company Efim should be completed very soon. This loan which is being arranged by Long Term Credit Bank of Japan, Soditic, and Gulf International Bank carries a spread of ⅝ per cent throughout.

A formal mandate to arrange a $250m ten-year loan for Taiwan Power Company is widely expected to be awarded to Chase Manhattan Asia and Crocker National Bank. The borrower is expected to pay a split spread of ⅜ per cent for the first seven years rising to ½ per cent.

The Islamic Republic of Pakistan is raising $100m for 12 months under the aegis of Chase Manhattan, Gulf International, Habib Bank, Manufacturers Hanover, and Morgan Guaranty. The borrower is paying a spread of ⅝ per cent over Libor throughout.

FT INTERNATIONAL BOND SERVICE

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Amoco 13¼ 88	75	87½	88	−0¼	−1¼	16.43
CIBC 14½ 84	185	94¾	95¼	+0¼	−0¼	16.91
CIBC 15¼ 86	75	96¼	96¾	0	−1	16.30
CNA 15¼ 96	75	90½	91	−0¼	−1¼	16.95
CNE 12¾ 91	100	80¾	81¼	−0¼	−1¼	16.86
Citicorp Int. Fin. 15 86	150	95¼	95¾	0	−0¼	16.22
Citicorp O/S 15½ 84	175	97¾	98¼	0	−0¼	16.42
Dupont Canada 13½ 91	65	87¾	88¼	+0¼	−0¼	15.86
EEC 14¾ 93	65	89⅞	90¼	+0⅛	−1⅛	16.67
EIB 12¾ 89	75	83⅜	83⅞	+0⅛	−1½	16.65
Eldorado 13¾ 86	50	89¼	89¾	0	−1	16.64
Elec. de France 13 88	125	85⅞	86⅜	+0⅛	−0¼	16.83
Fed. Bs. D. 12¾ 85 (N)	50	86¾	87¼	−0⅛	−0¼	16.74
Fed. Bs. D. 15¾ 84 (J)	40	98	98½	−0⅝	−0⅛	16.49
Fin. Exp. Credit 10½ 85	50	81¼	81⅞	0	−1¼	17.41
Finland, Rep. of 9½ 86	100	76⅝	77⅛	0	−0⅝	17.17
Ford Cr. O/S Fin. 16 84	150	99¼	99¾	+0⅛	−0⅞	16.11
Ford Cr. O/S Fin. 15 85	150	97	97½	0	−0¼	16.07
Gaz de France 13½ 86	80	89⅛	89⅝	−0⅛	−1⅛	17.00
GMAC O/S Fin. 12⅞ 86	100	85⅞	86⅜	+0⅛	−1¼	16.47
GMAC O/S Fin. 14¾ 87	100	92⅝	93⅛	+0⅛	−0¼	16.71
Gen. Mts. O/S 11¾ 87	100	83	83½	+0⅛	−1⅛	16.24
Genstar 14¼ 91	50	93¼	93¾	−0⅛	−0⅞	16.07
Hiram Walker 16 86	50	100⅜	100⅞	+0⅛	−0⅞	15.74
IBM Wld. Trade 12½ 88	200	89⅞	90⅜	−0⅛	−1⅛	14.94
IBM Wld. Trade 14¼ 84	100	99½	100	0	−1	14.79
IBM Wld. Trade 14¼ 85	80	98¾	99¼	+0⅛	−0⅞	15.08
Nat. Bk. Canada 15¾ 84	40	97⅛	97⅝	+0⅛	−0¼	16.41
Newfoundland 13½ 90	60	88⅛	88⅝	+0⅛	−0⅛	16.55
Nova Scotia 15 91	75	92⅞	93⅜	+0⅛	−0⅛	16.42
Ontario Hydro 13½ 91	100	86⅝	87⅛	+0⅛	−1	16.28
Pacific Gas Elec. 16 88	75	100⅝	101⅛	−0⅛	−0⅛	15.78
PSNH Int. Fin. 17 86	30	97⅞	98⅜	0	+0⅛	17.58
Queb. Hy. 13 91 (WW)	100	82½	83	+0⅛	−0⅛	16.70
Royal Bk. Canada 14 88	100	92¼	92¾	0	−1⅛	15.39
SNCF 13 91	75	84⅞	85⅜	−0⅛	−1⅛	16.15
Sth. California 14 87	50	93⅞	94⅜	0	−0⅞	15.62
Sth. California 14¾ 88	50	93⅞	94⅜	0	−1⅛	16.20
Sven Handlsbk. 13¾ 88	45	88⅛	88⅝	0	−0⅞	16.72
Swed. Ex. Credit 13 86	75	87½	87⅞	0	−0⅛	17.25
Swed. Ex. Cred. 15¾ 86	50	96⅜	96⅞	0	−0⅞	16.93
Toronto-Dom. Bk. 14 84	50	93½	94	+0⅛	−0½	17.01
Tribune O/S Fin. 14 86	60	91⅞	92⅜	0	−0⅛	16.61
Wells Fargo Int. 15½ 84	50	97⅞	98⅜	+0⅛	−0⅛	16.42
World Bank 10¾ 87	300	77⅞	78⅜	+0⅛	−0⅛	16.37
World Bank 14⅜ 86	500	92½	93	0	−0⅛	16.62

Average price changes... On day 0 on week −0⅞

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Asian Dev. Bank 10 91	100	94	94½	+0½	−1¼	10.95
Austria Rep. of 8¾ 92	150	84½	84⅞	−1¼	−2	10.70
CECA 7¾ 92	150	83⅞	84⅜	−0⅛	−0⅛	10.34
CECA 10 91	120	96⅞	97⅜	−0⅛	−0⅛	10.45
CII-Honeywell 8¾ 90	125	84¾	85½	0	−0⅞	11.08
Council of Europe 10 91	160	96⅝	97⅛	0	−0⅞	10.49
EIB 8½ 90	200	87½	88⅛	+0½	+0¼	10.63
EIB 10½ 91	200	97⅞	98⅜	+0½	−0⅛	10.76
ESCOM 9¾ 87	100	89⅝	90	0	−0⅛	11.68
Finland, Rep. of 10 89	100	96	96½	+0½	−0⅛	10.69
Iberduero SA 9 90	100	90⅛	90⅞	−0⅛	−0⅛	10.70
Ind. Bk. Finland 8½ 90	50	87½	88⅛	0	−0½	10.62
Int.-Am. Dv. Bk. 10 91	100	95¼	95⅞	+0⅛	−0⅛	10.76
Japan Air Lines 8¾ 87	100	89⅜	90⅛	+0⅛	+0½	10.43
Japan Dev. Bk. 7⅝ 87	100	87¼	87⅞	+0⅛	−0⅛	10.54
Kobe, City of 8 90	100	84⅞	85⅜	+0⅛	−1⅛	10.85
Midland Int. Fin. 8½ 90	150	87⅞	88⅜	−0⅛	−0⅛	10.56
Nuclebras 9¾ 88	100	85½	86⅛	−0½	−0⅛	12.91
OKB 8½ 92	150	81⅝	82⅛	−1⅛	−3⅛	11.23
Oslo, City of 8¾ 90	80	88⅜	88⅞	0	−1⅛	10.82
Renault Acc. 10¾ 86	150	96½	97	+0⅛	−0⅛	11.64
Venezuela, R. of 9¾ 90	150	93⅛	93⅝	+0⅛	+0⅛	10.89
World Bank 8 90	700	84¼	85	−0⅛	−0⅛	10.76

Average price changes... On day −0⅛ on week −0⅛

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Aeroport Paris 6½ 91	60	90⅛	90⅝	−0⅛	−1½	7.58
BFCE 6½ 91	100	92⅝	92⅞	−0½	−1	7.59
Bayer Int. Fin. 5⅛ 92	100	87	87⅜	−2¼	−3	6.96
Belgelectric Fin. 7¼ 91	100	98¼	98½	−0⅛	−0⅛	7.99
Bergen, City of 6¾ 91	40	97½	97¾	−0⅜	0	7.09
CECA 6¾ 91	80	94¾	95	−0½	−0¾	7.51
Denmark 5¾ 90	80	85	85¼	−0⅜	−1⅜	8.17
Dome Petroleum 5¾ 91	100	90	90¼	−2⅛	−3⅛	7.22
Dome Petroleum 7¼ 90	100	99¾	100	−0¼	−2	7.27
Elec. de France 5¾ 90	100	82¾	82⅞	+0⅛	−2⅞	7.99
Eurofima 5¾ 92	80	†95	95½	0	−3½	8.38
Finland, Rep. of 5⅝ 90	80	83⅝	83⅞	−0⅝	−1⅛	8.26
Franc. Petroles 6½ 91	80	90½	90¾	−0⅞	−2⅛	7.92
Genstar 7 91	100	99⅛	99⅜	−0⅞	−0⅞	7.10
Int.-Amer. Dv. Bk. 7 91	100	97	97¼	−0¼	−0⅞	7.42
Japan Dev. Bank 5¾ 90	100	92	92½	−0⅞	−1	6.92
Mt. Blanc Tunnel 5½ 90	80	†84	85	−0¼	0	7.97
Newag 5¾ 90	80	†89	89¼	−2⅛	−3	7.47
OKB 7 93	100	97	97¼	−1⅝	−2⅛	7.37
Oslo, City of 6¾ 90	80	86½	86⅞	−1¼	−1⅜	7.99
Philips Lamps 5¾ 92	100	85	85⅜	−1⅛	−2⅛	7.27
Swed. Ex. Credit 7¼ 91	75	94⅛	94⅝	−0⅛	−1⅛	8.08
Trade Dev. Fin. 6½ 90	50	†86	86½	+0⅛	−2½	8.35
Voest-Alpine 5¾ 90	80	84	84½	−1½	−1	8.28
World Bank 6 91	100	88	88½	−1⅝	−3	7.79
World Bank 7 90	100	98½	98¾	−1⅛	−1⅛	7.21

Average price changes... On day −1 on week −1⅞

YEN STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Asian Dev. Bk. 8⅜ 91	15	96⅝	97⅛	0	−0⅛	8.67
Australia 6⅜ 88	20	84⅞	85⅜	0	−0⅛	9.53
EIB 7⅜ 89	12	93⅛	94⅛	0	−0⅛	8.87
Finland 6.8 85	10	94⅞	95⅜	0	−0⅛	9.83
Finland, Rep. of 8⅜ 87	15	96	97	0	−0⅛	9.17
New Zealand 8⅜ 87	15	96⅞	97⅞	0	+0⅛	8.96

Average price changes On day 0 on week −0⅛

OTHER STRAIGHTS	Issued	Bid	Offer	Change on day	Change on week	Yield
Bell Canada 10¼ 86 C$	80	†82½	83½	0	0	15.84
CIBC 13½ 85 C$	50	†90	91	−0½	−1½	17.08
CIBC 11½ 85 C$	80	†84½	85½	+0½	+0½	17.06
Federal Dev. 11½ 90 C$	60	†75½	76½	0	0	16.88
Fst. Can. Inv. 10 84 C$	50	†82½	83½	0	−0½	18.43
R. Bk. Canada 10 86 C$	40	*†82½	84½	0	−2½	15.10
Tordom Cpn. 13½ 85 C$	30	*†91	92	0	0	16.67
M. Bk. Dnmk. 9 91 EUA	25	84⅝	85⅞	0	−1⅛	11.51
SOFTE 8¼ 89 EUA	40	80⅛	81⅛	0	−2	12.26
U. Bk. Nwy. 9½ 90 EUA	18	89⅛	90⅛	0	−1⅛	11.37
Algemene Bk. 10¼ 86 Fl	60	92¼	92¾	−0½	−0⅛	12.48
Amro Bank 12 86 Fl	75	98¼	99¼	−0⅛	−0½	12.26
Heineken NV 10 87 Fl	100	90⅞	91⅛	−0⅛	−0⅛	12.19
Nat. Nedrlndn. 10 88 Fl	60	92⅞	93⅛	−0⅛	−0⅛	11.54
Ned. Midd. Bk. 10 85 Fl	75	93⅛	93⅞	−0½	−0⅞	12.07
Pierson 10¼ 86 Fl	50	91⅝	92⅛	0	−0⅛	12.68
Rabobank 12 86 Fl	50	98	98½	−0¼	−0¼	12.47
Air France 14½ 86 FFr	200	88⅞	89⅞	−0½	−2½	17.98
Bk. America 14½ 86 FFr	250	89⅛	90⅛	0	−0⅛	17.87
Charb'nages 13⅞ 85 FFr	400	89⅜	89⅞	0	−0⅛	17.75
EIB 14⅛ 88 FFr	300	86⅜	87⅜	0	−0½	17.86
La Redoute 14¾ 85 FFr	125	86	87	0	−0½	19.14
OKB 14 86 FFr	400	87⅜	88⅜	−0⅛	−0⅛	17.99
Solvay et C. 14¾ 86 FFr	200	92⅜	93⅜	0	0	17.03
Swed. E. Cr. 14¾ 86 FFr	250	85	86	−0⅛	−1⅛	19.57
U. Mex. Sts. 14 85 FFr	150	86⅛	87⅛	0	−1⅛	19.01
Acona 14 85 £	20	92⅛	93⅛	0	−0⅞	16.47
Beneficial 14¼ 90 £	20	84	84⅞	+0⅛	+0⅛	17.75
BNP 13½ 91 £	15	85⅛	86	0	−0⅛	16.57
CECA 13½ 88 £	20	88⅛	89	0	−0⅛	16.27
Citicorp O/S 13½ 90 £	50	89⅛	90⅛	0	−0⅞	15.86
Fin. Ex. Cred. 13¾ 86 £	15	92⅛	93⅛	+0⅛	+0⅛	15.02
Gen. Elec. Co. 12½ 89 £	50	85¼	86	0	+0⅛	15.84
Hiram Walker 14¾ 86 £	25	93¼	94	+0⅛	0	16.23
Privatbanken 14½ 88 £	12	90½	91¼	0	+0⅛	16.82
J. Rothschild 14⅜ 90 £	12	92½	93¼	−0⅛	−0⅛	15.78
Royal Trustco 14 86 £	12	92½	93½	−0⅛	−0⅛	16.18
Swed. Ex. Cr. 13⅜ 86 £	20	92¼	93	0	−0⅛	16.08
Akzo 9¼ 87 LuxFr	500	88⅛	89⅛	0	−0⅛	11.79
Euratom 9¾ 88 LuxFr	500	86¼	87¼	0	+0⅛	12.39
Eurofima 10½ 87 LuxFr	500	88¼	89¼	0	−0½	13.27
EIB 9¾ 88 LuxFr	600	85⅛	86⅛	0	−1	13.11
Volvo 9¾ 87 LuxFr	500	85⅞	86⅞	0	−0½	13.25

FLOATING RATE NOTES	Spread	Bid	Offer	C.dte	C.cpn	C.yld
Bank of Montreal 5¼ 90	0¼	98	98½	18/12	16⅝	17.05
BBL Int. 5 86	0¼	99⅛	99⅝	20/11	18.31	18.43
BNP 5½ 88	‡0¼	99¼	99¾	29/10	18.81	18.91
Christiania Bk. 5½ 91	‡0¼	98½	99	5/11	18.19	19.43
Citicorp O/S Fin. 84	‡0	99⅝	99⅞	31/8	18⅞	18.99
C. Itoh 5¼ 87	0¼	99⅝	100⅛	18/9	15.44	15.46
Co-operative Bk. 6 86	0¼	99⅛	99⅝	15/11	19.56	19.64
Den Norske Credit 6 90	‡0¼	99	99½	5/11	19.19	19.33
Genfinance 5¼ 87	0¼	99	99½	30/10	16.94	17.07
Genfinance 5¼ 92	0¼	98⅞	99⅜	30/12	18.31	18.47
Giro und Bank 5¼ 91	‡0¼	98⅞	99⅜	23/9	19.06	19.23
GZB 5¼ 92	‡0¼	98	98½	6/9	17¼	17.56
Ind. Bank Japan 5¼ 88	0¼	99	99½	9/10	16.44	16.56
Lloyds Eurofin 8 90 £	0¼	97	97½	6/1	13⅝	14.01
Lloyds Eurofin 5¼ 92	0¼	98⅛	98⅝	4/12	17.44	17.73
LTCB Japan 5¼ 88	0¼	99⅛	99⅝	13/12	17⅛	17.36
LTCB Japan 5½ 89	0¼	99⅛	99⅝	16/1	18.32	18.43
Man. Hanov. O/S 5¼ 94	‡0¼	99⅛	99⅝	30/8	19.06	19.16
Merrill Lynch O/S 87	‡0¼	100⅛	100⅝	9/11	19.06	18.99
Midland Int. Fin. 5¼ 92	0¼	98⅜	98⅞	5/12	17⅝	17.62
Midland Int. Fin. 9 91	0¼	98½	99	30/10	16.81	17.03
Nacional Fin. 6¼ 86	0¼	98⅝	99⅛	25/1	19⅛	19.47
Nacional Fin. 5½ 88	0¼	97⅛	97⅝	25/9	14⅞	15.28
Nat. Bk. Canada 5¼ 88	0¼	98½	99	24/9	14½	14.68
Nat. West. 5¼ 94	§0¼	98⅛	98⅝	14/10	16.19	16.45
Nat. West. Fin. 5¼ 91	§0¼	98⅜	98⅞	15/1	18⅛	18.38
Nat. West. Fin. 5¼ 92	§0¼	98⅝	99⅛	23/10	16.81	17.07
Pemex 6 91	0¼	97⅛	97⅝	8/10	15.31	15.73
Societe Generale 5¼ 91	0¼	98⅞	99⅜	22/1	18⅝	18.79
Sparebanken 6 87	0¼	97⅞	98⅜	19/12	16.81	17.16
Svenska Hndlsbk. 5 87	0¼	99	99½	15/1	18⅛	18.26

Average price changes... On day 0 on week 0

CONVERTIBLE BONDS	Cnv. date	Cnv. price	Bid	Offer	Chg. day	Prem
Ajinomoto 5¼ 96	7/81	933	89⅛	90⅛	−2⅛	−2.50
Bow Valley Inv. 8 95	4/81	23.12	100⅜	101⅜	+0⅛	22.57
Canon 6¼ 95	1/81	829	177⅜	178⅞	−8½	−4.08
Credit Suisse 4¾ 93	10/78	1235	86½	87	−3¾	7.99
Digicon Fin. 8½ 95	10/81	29.5	†102	103	−4	13.04
Fujitsu 5½ 96	7/81	732	108⅛	109⅛	−4	−1.19
Furukawa Elec. 5¼ 96	7/81	300	114⅞	115½	−8	−7.07
Hanson O/S Fin. 9½ 96	8/81	2.74	88	89½	+0⅛	2.86
Hitachi Cred.-Cpn. 5 96	7/81	1966	88⅛	89⅛	−2⅛	−1.12
Ina Overseas 8¾ 2000	4/81	42	†99	100	−1⅛	1.93
Inchcape 8 95	2/81	4.55	68⅛	69⅛	+1⅛	8.07
Marion Int. Fin. 9 95	12/80	15.5	78½	79⅛	+0⅛	38.11
Marui 6 96	7/81	931	87⅜	88⅜	−1⅛	−1.33
Matsushita El. 7½ 95	11/80	590	86⅞	87⅞	−2⅞	−1.75
Murata 5¼ 96	7/81	2190	103⅛	104⅛	−3⅞	−1.06
NKK 6½ 96	7/81	188	115⅛	116⅛	−1½	38.81
Ricoh 6⅛ 95	8/80	604	148½	149⅛	−5	−3.03
Sumitomo M. Ind. 7 95	2/81	181	148½	149⅛	−2⅛	−1.71
Swiss Bk. Cpn. 6¼ 90	9/80	200	74⅛	76⅛	−0½	36.85
Taylor Woodrow 8¾ 90	1/81	4.94	90⅛	91½	−0⅛	4.43
Tranaco Int. 8¾ 95	2/81	68	78	79½	+0⅛	21.02
Tricorp 8½ 95	12/80	31.25	85⅛	87	−1⅛	19.97
Union Bk. Switz. 5 89	2/80	70.79	72⅛	74⅛	0	10.18
Sharp Cpn. 6½ 88 DM	9/80	696	199⅞	200⅞	−0⅛	−1.30
Uny Co. 6½ 85 DM	11/79	879.3	115	116	−0⅛	−0.81

EUROBOND TURNOVER

(nominal value in $m)

	Cedel	Euro-clear
U.S. $ bonds		
Last week	2,262.2	3,801.1
Previous week	2,612.6	3,297.4
Other bonds		
Last week	775.4	214.9
Previous week	591.5	286.6

* No information available—previous day's price.

† Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the amount issued is in millions of currency units except for Yen bonds where it is in billions. Change on week=Change over price a week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. C.dte=Date next coupon becomes effective. Spread=Margin above six-month offered rate (‡ three-month; § above mean rate) for U.S. dollars. C.cpn = The current coupon. C.yld = The current yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg. day=Change on day. Cnv. date=First date for conversion into shares. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Kredietbank NV; Credit Commercial de France; Credit Lyonnais; Commerzbank AG; Deutsche Bank AG; Westdeutsche Landesbank Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxembourg; Kredietbank Luxembourg; Algemene Bank Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank; Union Bank of Switzerland; Akroyd and Smithers; Bankers Trust International; Credit Commercial de France (Securities) London; Citicorp International Bank; Daiwa Europe NV; Deltec Trading Company; EBC; First Chicago; Goldman Sachs International Corporation; Hambros Bank; IBJ International; Kidder Peabody International; Manufacturers Hanover; Merrill Lynch; Morgan Stanley International; Nikko Securities Company (Europe); Orion Royal Bank; Salomon Brothers International; Samuel Montagu and Co.; Scandinavian Bank; Societe Generale Strauss Turnbull; Sumitomo Finance International; S. G. Warburg and Co.; Wood Gundy.

Closing prices on August 28

CURRENCIES, MONEY and GOLD

GOLD

	Aug. 28		Aug. 27	
Gold Bullion (fine ounce)				
Close	$426-438	(£220½-221½)	$411-413	(£223-224)
Opening	$422-424	(£225¼-226¼)	$413¼-415¼	(£224½-225½)
Morning fixing	$425.50	(£231.375)	$414.75	(£225.322)
Afternoon fixing	$425	(£230.228)	$411.75	(£223.656)
Gold Coins				
Krugerrand	$439-440	(£237½-238)	$424-425	(£230¼-230¾)
1/2 Krugerrand	$230-231	(£124½-125)	$222-223	(£120½-121)
1/4 Krugerrand	$117-118	(£63¼-63¾)	$113-114	(£61¼-61¾)
1/10 Krugerrand	$49-50	(£26½-27)	$47-48	(£25½-26)
Mapleleaf	$439-440	(£237½-238)	$424-425	(£230¼-230¾)
New Sovereigns	$106-107	(£57¼-57¾)	$102½-103½	(£55½-56)
King Sovereigns	$118-120	(£63¾-64¾)	$118-120	(£64-65)
Victoria Sovs	$118-120	(£63¾-64¾)	$118-120	(£64-65)
French 20s	$123-128	(£66½-69¼)	$118-123	(£64-66¾)
50 pesos Mexico	$529-533	(£286¼-288¼)	$512-515	(£278-279½)
100 Cor. Austria	$414-417	(£224-225½)	$399-402	(£216½-218¼)
$20 Eagles	$565-570	(£305¾-308¼)	$562-567	(£305-307¾)

THE POUND SPOT AND FORWARD

Aug 28	Day's spread	Close	One month	% p.a.	Three months	% p.a.
U.S.	1.8350-1.8510	1.8480-1.8500	0.63-0.73c dis	−4.41	2.22-2.32dis	−4.91
Canada	2.2120-2.2250	2.2210-2.2230	1.40-1.50c dis	−7.83	4.35-4.55dis	−8.01
Nethlnd.	5.02-5.05	5.02½-5.03½	⅛c pm-⅜ dis	−0.30	par-½ dis	−0.20
Belgium	74.00-74.60	74.15-74.25	47-57c dis	−8.47	128-138 dis	−7.17
Denmark	14.16-14.22	14.17½-14.18½	7¼-8¾ore dis	−6.56	17¼-19 dis	−5.11
Ireland	1.2365-1.2425	1.2380-1.2400	0.23-0.37p dis	−2.90	0.91-1.06dis	−3.18
W. Ger.	4.51-4.55	4.53-4.54	¾-½pf pm	1.32	1⅝-1⅜ pm	1.21
Portugal	121.20-123.00	122.40-122.70	45-75c dis	−5.87	175-235 dis	−6.69
Spain	181.70-183.00	182.50-182.80	80-110c dis	−6.24	280-335 dis	−6.73
Italy	2258-2274	2269-2271	39½-47½lire dis	−21.41	114¼-117¾d	−20.48
Norway	11.20-11.27	11.24½-11.25½	1¾ore pm-¼ dis	0.53	1½-¼ pm	0.31
France	10.82-10.89	10.83-10.85	15¾-16¾c dis	−17.43	39½-40½dis	−14.76
Sweden	9.65-9.71	9.69½-9.70½	¼-1½ore dis	−1.55	2-3¼ dis	−1.08
Japan	420-437	423½-424½	2.45-2.15y pm	6.51	6.75-6.45 pm	6.23
Austria	31.70-31.90	31.75-31.85	7-2gro pm	1.70	10 pm-par	0.63
Switz.	3.92-3.96	3.93½-3.94½	1⅝-1⅛c pm	4.19	4¼-3¾ pm	4.06

Belgian rate is for convertible francs. Financial franc 79.80-79.90. Six-month forward dollar 4.08-4.18c dis. 12-month 6.60-6.75c dis.

EXCHANGE CROSS RATES

Aug. 28	Pound Sterling	U.S. Dollar	Deutschem'k	Japan'se Yen	French Franc	Swiss Franc	Dutch Guild'	Italian Lira	Canada Dollar	Belgian Franc
Pound Sterling	1.	1.849	4.535	424.0	10.84	3.940	5.030	2270.	2.222	74.20
U.S. Dollar	0.541	1.	2.453	229.3	5.863	2.131	2.720	1228.	1.202	40.13
Deutschemark	0.221	0.408	1.	93.50	2.390	0.869	1.109	500.6	0.490	16.36
Japanese Yen 1,000	2.358	4.361	10.70	1000.	25.57	9.292	11.86	5354.	5.241	175.0
French Franc 10	0.923	1.705	4.184	391.1	10.	3.365	4.640	2094.	2.050	68.45
Swiss Franc	0.254	0.469	1.151	107.5	2.751	1.	1.277	576.1	0.564	18.83
Dutch Guilder	0.199	0.368	0.902	84.29	2.155	0.783	1	451.3	0.442	14.75
Italian Lira 1,000	0.441	0.815	1.998	186.8	4.775	1.736	2.216	1000.	0.979	32.69
Canadian Dollar	0.450	0.832	2.041	190.8	4.878	1.773	2.264	1022.	1.	33.39
Belgian Franc 100	1.348	2.492	6.112	571.4	14.61	5.310	6.779	3095.	2.995	100

EURO-CURRENCY INTEREST RATES (Market closing Rates)

Aug. 28	Sterling	U.S. Dollar	Canadian Dollar	Dutch Guilder	Swiss Franc	West German Mark	French Franc	Italian Lira	Belgian Franc Convertible	Japanese Yen
Short term	13¼-13½	17¼-17½	22-23	13½-13⅝	95-100	12-12⅛	20-30	18-25	12-16¾	6¾-7
7 days' notice	13¼-13½	17⅜-17⅝	22-23	13⅝-13¾	2¾-3¼	12-12⅛	22-30	32-37	15¼-19¼	6¾-7
Month	13⅝-13¾	17⅞-18⅛	22⅛-22½	13 7/16-13 9/16	8⅜-8½	12¼-12⅜	31-33	35¼-37	20⅜-22⅜	7⅛-7⅜
Three months	14-14⅛	18½-18¾	21⅞-22⅛	13 9/16-13 11/16	9⅛-9¼	12½-12⅝	28-30	34½-35½	20¼-21	7⅜-7⅝
Six months	14⅛-14¼	18½-18¾	21⅛-21½	13⅝-13¾	9½-9⅝	12 11/16-12 13/16	24½-26½	32¾-33¼	19¾-20¼	7¼-7½
One Year	14 1/16-14 3/16	18-18¼	20¼-20⅝	15¼-13⅝	8 13/16-8 15/16	12 11/16-12 13/16	22½-24½	30-31	18½-19	7⅞-8⅛

SDR linked deposits: one-month 15 9/16-15 11/16 per cent; three months 16 9/16-16 11/16; six months 16 5/8-16 11/16 per cent; one-year 15 11/16-16 5/16 per cent.

ECU linked deposits: one-month 18 5/16-18 7/16 per cent; three months 18¼-18½ per cent; six months 17 9/16-17 11/16 per cent; one-year 16⅝-17 per cent.

Asian $ (closing rates in Singapore): one-month 18¼-18½ per cent; three months 18 11/16-18 13/16 per cent; six months 18¾-19 per cent; one-year 17 13/16-18 5/16 per cent. Long-term Eurodollar two years 17⅛-17⅜ per cent; three years 17⅛-17⅜ per cent; four years 16⅞-17⅛ per cent; five years 16¾-17 per cent; nominal closing rates.

The following nominal rates were quoted for London dollar certificates of deposit: one-month 17.85-17.95 per cent; three months 18.20-18.30 per cent; six months 18.40-18.50 per cent; one-year 17.85-17.95 per cent.

FT LONDON INTERBANK FIXING (11.00 a.m. AUGUST 28)

3 months U.S. dollars		6 months U.S. dollars	
bid 18 15/16	offer 18 15/16	bid 18 7/8	offer 19

The fixing rates are the arithmetic means, rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted by the market to five reference banks at 11 am each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque Nationale de Paris and Morgan Guaranty Trust.

LONDON MONEY RATES

Aug. 28 1981	Sterling Certificate of deposit	Interbank	Local Authority deposits	Local Auth. negotiable bonds	Finance House Deposits	Company Deposits	Discount Market Deposits	Treasury Bills ⊕	Eligible Bank Bills ⊕	Fine Trade Bills ⊕
Overnight	—	10-13	12⅛-12⅞	—	—	12⅛-12⅞	10-13	—	—	—
2 days notice	—	—	13⅝-13⅝	—	—	—	—	—	—	—
7 days or	—	—	—	—	—	—	—	—	—	—
7 days notice	—	13⅛-13⅝	13¾-13⅞	—	13⅛	13⅛-13⅞	12⅛-12⅝	—	—	—
One month	13¾-13⅝	13⅝-13¾	13¾	14⅝-14⅜	13¾	14	12¾	12 11/16-12 25/32	12 13/16	13⅞
Two months	13 13/16-13 15/16	13¾-13⅞	—	14⅜-14	13⅞	14⅛	13	12 13/16-13	13 1/16	13⅛
Three months	14-13⅞	13 15/16-14⅛	14	14⅜-14	14⅛	14⅜	13⅛	13 1/16-13¼	13 1/16	13⅞
Six months	14 1/16-14 3/16	14⅛-14¼	14	13¾-13⅛	14 5/16	—	—	—	13 5/16	14
Nine months	14⅛-14⅛	14⅛-14⅜	—	14⅜-14	14 7/16	—	—	—	—	—
One year	14 1/16-14⅛	14 1/16-14⅜	14⅜	14⅜-14	14⅛	—	—	—	—	—
Two years	—	—	14½	—	—	—	—	—	—	—

Local authorities and finance houses seven days' notice, others seven days' fixed. Long-term local authority mortgage rates nominally three years 14½ per cent; four years 14¾ per cent; five years 14¾ per cent. ⊕ Bank bill rates in table are buying rates for prime paper. Buying rates for four-month bank bills 13 5/16 per cent; four months trade bills 13⅞ per cent.

Approximate selling rate for one-month Treasury bills 12 3/16-12⅛ per cent; two months 12 23/32-12⅞ per cent; three months 13 1/16-13⅛ per cent. Approximate selling rate for one-month bank bills 12¾-12 13/16 per cent; two months 12 15/16 per cent and three months 13 1/16-13 7/32 per cent; one month trade bills 13⅝ per cent; two months 13¾ per cent and three months 13⅞ per cent.

Finance Houses Base Rates (published by the Finance Houses Association) 14½ per cent from September 1, 1981. Clearing Bank Deposit Rates for sums at seven days' notice 9 per cent. Clearing Bank Rates for lending 12 per cent. Treasury Bills: Average tender rate of discount 13.2463 per cent.

CURRENCY MOVEMENTS

Aug. 28	Bank of England Index	Morgan Guaranty Changes%
Sterling	91.3	−32.2
U.S. dollar	111.2	+ 4.4
Canadian dollar	88.7	−17.0
Austrian schilling	111.4	+21.8
Belgian franc	104.8	+8.6
Danish kroner	85.7	−11.0
Deutsche mark	116.1	+38.6
Swiss franc	134.1	+81.8
Guilder	107.7	+13.9
French franc	81.6	−12.0
Lira	56.9	−56.0
Yen	141.9	+35.3

Based on trade weighted changes from Washington agreement December, 1971. Bank of England Index (base average 1975=100).

OTHER CURRENCIES

Aug. 28	£	$		£ Note Rates
Argentina Peso	9700-9720†	5253-5275†	Austria	31.65-31.95
Australia Dollar	1.6085-1.6125	0.8705-0.8710	Belgium	79.45-80.25
Brazil Cruzeiro	188.43-189.43	102.18-102.69	Denmark	14.12-14.27
Finland Markka	8.445-8.458	4.5810-4.5830	France	10.82-11.02
Greek Drachma	108.288-112.635	60.30-60.60	Germany	4.51-4.55
Hong Kong Dollar	10.95¼-10.96¼	5.9300-5.9350	Italy	2235-2290
Iran Rial	150.00	82.00*	Japan	423-428
Kuwait Dinar (KD)	0.518-0.524	0.2836-0.2839	Netherlands	5.01½-5.06½
Luxembourg Fr	74.15-74.25	40.12-40.14	Norway	11.19-11.31
Malaysia Dollar	4.3525-4.3625	2.3570-2.3590	Portugal	119-128
New Zealand Dlr.	2.2280-2.2330	1.2050-1.2060	Spain	178½-188
Saudi Arab. Riyal	6.25-6.31	3.4195-3.4225	Sweden	9.62-9.72
Singapore Dollar	3.9725-3.9825	2.1515-2.1545	Switzerland	3.92½-3.96½
Sth. African Rand	1.7455-1.7475	0.9440-0.9460	United States	1.83-1.85
U.A.E. Dirham	6.71-6.77	3.6715-3.6735	Yugoslavia	76-83

† Rate given for Argentina is the commercial rate. The financial rate for sterling is 13,863-13,903 and for the dollar 7,500-7,550. * Selling rate.

EMS EUROPEAN CURRENCY UNIT RATES

	ECU central rates	Currency amounts against ECU August 28	% change from central rate	% change adjusted for divergence	Divergence limit %
Belgian Franc	40.7985	41.1694	+0.91	+1.14	±1.5361
Danish Krone	7.91917	7.86379	−0.70	−0.47	±1.6413
German D-Mark	2.54502	2.51136	−1.32	−1.09	±1.1386
French Franc	5.99526	6.02615	+0.52	+0.75	±1.3638
Dutch Guilder	2.81318	2.78985	−0.83	−0.60	±1.5159
Irish Punt	0.685145	0.687877	+0.41	+0.64	±1.6688
Italian Lira	1262.92	1258.49	−0.35	−0.35	±4.1116

Changes are for ECU, therefore positive change denotes a weak currency. Adjustment calculated by Financial Times.

WORLD VALUE OF THE POUND

The table below gives the latest available rate of exchange for the pound against various currencies on August 28, 1981. In some cases rates are nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

Abbreviations: (A) approximate rate, no direct quotation available; (F) free rate; (P) based on U.S. dollar parities and going sterling/dollar rates; (S) member of the sterling area other than Scheduled Territories; (T) tourist rate; (Bas) basic rate; (bg) buying rate; (Bk) bankers' rates; (cm) commercial rate; (ch) convertible rate; (fn) financial rates; (exC) exchange certificate rate; (k) Scheduled Territory; (nc) non-commercial rate; (nom) nominal; (o) official rate; (sg) selling rate.

Place	Local unit	Value of £ Sterling
Afghanistan	Afghani	101.60
Albania	Lek	10.12
Algeria	Dinar	7.6965
Andorra	French Franc	10.84
	Spanish Peseta	182.65
Angola	Kwanza	(CM) 62.956 / (T) 65.139
Antigua (S)	E. Caribbean $	5.0
Argentina	Ar. Peso	(cm) 9,710.0 / (fn) 13,883.0
Australia (S)	Australian $	1.6105
Austria	Schilling	31.80
Azores	Portugu'se Escudo	122.55
Bahamas (S)	Ba. Dollar	1.8490
Bahrain (S)	Dinar	0.692
Balearic Isles	Spa. Peseta	182.65
Bangladesh (S)	Taka	33.90
Barbados (S)	Babados $††	3.6980
Belgium	B. Franc	(cm) 74.20 / (fn) 79.85
Belize	B $	3.6980
Benin	C.F.A. Franc	542.0
Bermuda (S)	Bda $	1.8490
Bhutan	Indian Rupee	16.60
Bolivia	Bolivian Peso	45.50
Botswana (S)	Pula	1.6315
Brazil	Cruzeiro ‡‡	188.93
Brit. Virgin Isles (S)	U.S. $	1.8490
Brunei (S)	Brunei $	3.9775
Bulgaria	Lev	1.7860
Burma	Kyat	13.60
Burundi	Burundi Franc	163.05
Cameroon Republic	C.F.A. Franc	542.0
Canada	Canadian $	2.2280
Canary Islands	Spanish Peseta	182.65
Cape Verde Isle	Cape V. Escudo	67.60
Cayman Islands (S)	Cay. Is. $	1.5408
Cent. Af. Repub.	C.F.A. Franc	542.0
Chad	C.F.A. Franc	542.0
Chile	C. Peso	(Bk) 71.95
China	Renminbi Yuan	3.2921
Colombia	C. Peso	(F) 102.31
Comoro Islands	C.F.A. Franc	542.0
Congo (Brazaville)	C.F.A. Franc	542.0
Costa Rica	Colon	37.05
Cuba	Cuban Peso	1.3440
Cyprus (S)	Cyprus £	0.8345
Czechoslovakia	Koruna	(com) 11.45 / n/c 19.93 / (T) 19.34
Denmark	Danish Krone	14.85
Djibouti	Fr.	325 (sg)
Dominica (S)	E. Caribbean $	5.0
Dominican Repub.	Dominican Peso	1.8490
Ecuador	Sucre	(O) 46.08 / (F) 57.10
Egypt	Egyptian £	(U) 1.32
Equatorial Guinea	Ekuele	365.3
Ethiopia	Ethiopian Birr	(P) 3.7450
Falkland Islands (S)	Falkland Is. £	1.0
Faroe Islands	Danish Krone	14.185
Fiji Islands	Fiji $	1.5415
Finland	Markka	8.4515
France	French Franc	10.84
French C'tyin Af*	C.F.A. Franc	542.0
French Guiana	Local Franc	10.84
French Pacific Is.	C.F.P. Franc	190 (sg)
Gabon	C.F.A. Franc	542.0
Gambia (S)	Dalasi	4.0
Germany (East)	Ostmark	4.535
Germany (West)	Deutsche Mark	4.535
Ghana (S)	Cedi	5.08
Gibraltar (K)	Gibraltar £	1.0
Greece	Drachma	110.9605

Place	Local unit	Value of £ Sterling
Greenland	Danish Kroner	14.185
Grenada (S)	E. Caribbean $	5.0
Guadaloupe	Local Franc	10.84
Guam	U.S. $	1.8490
Guatemala	Quetzal	1.8490
Guinea Republic	Syli	40.30
Guinea Bissau	Peso	71.85
Guyana (S)	Guyanese $	5.5140
Haiti	Gourd	9.25
Honduras Repub.	Lempira	3.71
Hong Kong (S)	H.K. $	10.96
Hungary	Forint	(com) 66.9442 / (T)(nc) 61.4187
Iceland (S)	I. Krona	14.417(§)
India (S)	Ind. Rupee	16.60
Indonesia	Rupiah	1,157.95
Iran	Rial	150.00(sg)
Iraq	Iraq Dinar	0.5610
Irish Republic (k)	Irish £	1.2390
Israel	Shekel	23.50
Italy	Lira	2,270.0
Ivory Coast	C.F.A. Franc	542.0
Jamaica (S)	Jamaica Dollar	3.2975
Japan	Yen	424.0
Jordan (S)	Jordan Dinar	0.619(sg)
Kampuchea	Riel	2,218.8
Kenya (S)	Kenya Shilling	16.38
Kiribati	Australian $	1.6105
Korea (Nth)	Won	1.92(‖)
Korea (Sth)	Won	1,263.6
Kuwait	Kuwait Dinar	0.521
Laos	New Kip	18.49
Lebanon	Lebanese £	8.6020
Lesotho	Loti	1.7465
Liberia	Liberian $	1.8490
Libya	Libyan Dinar	0.5475
Liechtenstein	Swiss Franc	3.94
Luxembourg	Lux Franc	74.20
Macao	Pataca	11.40
Madeira	Portug'se Escudo	122.55
Malagasy Republic	MG Franc	542.0
Malawi (S)	Kwacha	1.7150
Malaysia (S)	Ringgit	4.3575
Maldive Islands (S)	Mal Rupee	7.2235
Mali Republic	Mali Franc	1,084.0
Malta (S)	Maltese £	0.748
Martinique	Local Franc	10.84
Mauritania	Ouguiya ‡	109.90
Mauritius (S)	M. Rupee	16.30
Mexico	Mexican Peso	45.82
Miquelon	C.F.A. Franc	542.0
Monaco	French Franc	10.84
Mongolia	Tugrik	(o) 6.47(‖)
Montserrat	E. Caribbean $	5.0
Morocco	Dirham	10.31(sg)
Mozambique	Metical	55.36
Nauru	Australian Dollar	1.6105
Nepal	Nepalese Rupee	22.05
Netherlands	Guilder	5.03
Netherland Antilles	Antillian Guilder	3.3097
New Zealand (S)	N. Z. Dollar	2.2380
Nicaragua	Cordoba	18.45
Niger Republic	C. F. A. Franc	542.0
Nigeria (S)	Naira	1.230122(sg)
Norway	Norway Krone	11.25
Oman Sul'ate of (S)	Rial Omani	0.634
Pakistan	Pakistan Rupee	18.24
Panama	Balboa	1.8490
Papua N.Guinea (S)	Kina	1.2695
Paraguay	Guarani	232.47

Place	Local unit	Value of £ Sterling
Peru	Sol	exc (A) 795.61
Philippines	Philippine Peso	14.40
Pitcairn Islands (S)	£ Sterling	—
	New Zealand $	2.2305
Poland	Zloty	(Cm) 64.09 / (T) 64.09
Portugal	Portugu'se Escudo	122.55
Puerto Rico	U.S. $	1.8490
Qatar (S)	Qatar Ryal	6.68
Reunion Ile de la	French Franc	10.84
Romania	Leu	(Cm) 8.31 / (n/c) 20.45
Rwanda	Rwanda Franc	167.57
St. Christopher (S)	E. Caribbean $	5.0
St. Helena	St. Helena £	1.0
S. Lucia	E. Caribbean $	5.0
St. Pierre	Local Franc	10.84
S. Vincent (S)	E. Caribbean $	5.0
Salvador El	Colon	4.62
Samoa American	U.S. $	1.8490
San Marino	Italian Lira	2,270.0
Sao T'oe & Principe	Dobra	75.90
Saudi Arabia	Ryal	6.28
Senegal	C.F.A. Franc	542.0
Seychelles	S. Rupee	11.65(sg)
Sierra Leone (S)	Leone	2.22603
Singapore (S)	Singapore $	3.9775
Solomon Islands (S)	Solomon Is. $	1.6555
Somali Republic	Somali Shilling (3)	(A) 11.74
Somali Republic	Somali Shilling (4)	23.03
South Africa (S)	Rand	1.7465
South West African Territories (S)	S. A. Rand	1.7465
Spain	Peseta	182.65
Spanish ports in North Africa	Peseta	182.65
Sri Lanka (S)	S. L. Rupee	36.00
Sudan Republic	Sudan £ (1)	0.92
Sudan Republic	Sudan £ (2)	1.48
Surinam	S. Guilder	3.3097
Swaziland (S)	Lilangeni	1.7465
Sweden	S. Krona	9.70
Switzerland	Swiss Franc	3.94
Syria	Syria £	(A) 9.25
Taiwan	New Taiwan $	66.55
Tanzania (S)	Tan. Shilling	15.25
Thailand	Baht	42.20
Togo Republic	C.F.A. Franc	542.0
Tonga Islands (S)	Pa'anga	1.6105
Trinidad (S)	Trinidad & Tob. $	4.4376
Tunisia	Tunisian Dinar	0.970(sg)
Turkey	Turkish Lira	223.15
Turks & Caicos	U.S. $	1.8490
Tuvalu	Australian $	1.6105
Uganda (S)	Uganda Shilling	145.0
United States	U.S. Dollar	1.8490
Uruguay	Uruguay Peso	(cm) 20.33 / (fn) 20.31
Utd. Arab Emirates	U.A.E. Dirham	6.74
U.S.S.R.	Rouble	1.4140
Upper Volta	C.F.A. Franc	542.0
Vanuatu	Vatu	170(sg)
	Aust. Dollar	1.6105
Vatican	Italian Lire	2,270.0
Venezuela	Bolivar	7.92
Vietnam	Dong	(O) 4.0070 / (T) 4.70(‖)
Virgin Islands U.S.	U.S. Dollar	1.8490
Western Samoa (S)	Samoan Tala	1.9870
Yemen (Nth)	Ryal	8.30(sg)
Yemen (Sth)	S. Yemen Dinar	(A) 0.6275
Yugoslavia	New Y Dinar	73.6962
Zaire Republic	Zaire	10.340591
Zambia	Kwacha	1.6650
Zimbabwe	Zimbabwe $	1.3360

*That part of the French community in Africa formerly French West Africa or French Equatorial Africa. †Rupees per pound. ‡General rates of oil and iron exports 77.65. **Rate is the transfer market (controlled). ††Rate is now based on 2 Barbados $ to the dollar. ‡‡Now one official rate. (U) Unified rate. Applicable on all transactions except countries having a bilateral agreement with Egypt and who are not members of IMF. (‖) Based on gross rates against Russian rouble. (1) Official rates for government transactions and specified exports and imports. (2) Parallel rates for non-government transactions and non-specified exports and imports. §One new Krone=100 old Kronur. (3) Parallel exchange rate for essential imports. (4) Exports, non-essential imports and transfers.

WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interims or finals. The sub-divisions shown below are based mainly on last year's timetable.

Midland to drop horse trials sponsorship

By Michael Donne

MIDLAND BANK is to withdraw its support for the British Horse Society's national programme of horse trials throughout the country after next year. By then, it will have spent well over £1m on its 12 years of sponsoring these horse trials.

A statement issued by the BHS with the approval of Midland said that "having considered all the factors involved, especially its (the bank's) changing market objectives and the level of funds required to finance the sport's development", the bank has decided not to continue as national sponsor.

Under a previous "gentleman's agreement", the Midland Bank will continue its sponsorship through 1982, but after that it will withdraw, although it is hoped it may still retain some small stake in the sport.

The prime reason is rising costs. This year, the Midland Bank is spending over £300,000 on sponsoring nearly 120 horse trials of various kinds throughout Britain. The sport is expanding rapidly and costs of sponsoring are rising in consequence.

Among companies which undertake such sponsorship is Overseas Containers, which sponsors Miss Lucinda Prior-Palmer, who has won several major horse trials at home and overseas.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

Date	Title	Venue
Current	Motorcycle Show—BIKE '81 (01-385 1200) (until Aug 31)	Earls Court
Sept 3-5	Business and Light Aviation Show (01-643 8040)	Cranfield Airfield
Sept 6-9	Wholesale Jewellery Buyers' Autumn Fair (0935 20721)	The White House Regents Park
Sept 6-10	Watch, Jewellery and Silver Trades Fair (01-643 8040)	Earls Court
Sept 8-10	Laboratory 81 Exhibition (0799 22612)	Grosvenor House, W1
Sept 8-11	International Carpet Fair (01-839 5041)	Exhibition Centre, Harrogate
Sept 11-13	National CB Show (01-437 1002)	Old Horticultural Halls, SW1
Sept 13-16	MAB International Menswear Fair (01-404 0801)	Earls Court
Sept 15-17	Industrial Environment Show (01-686 6339)	Olympia
Sept 15-22	International Plastics Exhibition—INTERPLAS (021-705 6707)	National Exhibition Centre, Birmingham
Sept 15-18	Offshore Europe 81 Exhibition and Conference (01-549 5831)	Aberdeen
Sept 15-26	Chelsea Antiques Fair (0727 56069)	Town Hall
Sept 20-23	London Sports Trade Show (01-353 4000)	Earls Court
Sept 21-26	International Garage Equipment Trade Exhibition GARAGEQUIP '81 (01-235 7000)	Olympia
Sept 22-23	CCC Business Studies: First National Credit Management Convention and Exhibition (021-643 3589)	Warwick
Sept 22-24	Kent's Industry and Commerce Exhibition (01-729 0677)	Ashford

OVERSEAS TRADE FAIRS AND EXHIBITIONS

Date	Title	Venue
Current	International Exhibition of Agriculture, Machinery and Produce (01-486 1951) (until Sept 2)	Mexico
Current	International Fair of Consumer Goods (01-874 6034) (until Sept 6)	Stockholm
Current	International Fair (01-734 0543) (until Sept 2)	Frankfurt
Sept 4-13	International Radio and TV Exhibition (01-540 1101)	Berlin
Sept 5-8	International Exhibition of Sports Goods and Outdoor Activities (01-439 3964)	Paris
Sept 6-12	International Autumn Fair (01-493 3111)	Leipzig
Sept 9-12	Electronic Packaging Exhibition—INTERNEPCON (01-390 0281)	Taipei
Sept 9-17	International Engineering Fair (01-278 0281)	Brno
Sept 11-20	International Autumn Fair (01-486 1951)	Zagreb
Sept 14-18	SE Asian Production Machinery and Engineering Equipment Exhibition (01-486 1951)	Singapore
Sept 18-25	International Watchmaking Equipment Exhibition (01-235 2423)	Moscow
Sept 18-20	International Trade Fair for Tableware, China, Glassware, Cutlery and Metalware Accessories (01-204 7116)	Salzburg
Sept 19-20	Scandinavian Fashion Week (01-540 1101)	Copenhagen
Sept 20-23	Hardware Trade Fair (01-439 3964)	Paris

BUSINESS AND MANAGEMENT CONFERENCES

Date	Title	Venue
Sept 3	Citizens' Rights Office: Income Maintenance and the Personnel Officer's Job (01-405 5942)	Cora Hotel, WC1
Sept 7	British Computer Society: Query Languages for the End User (01-637 0471)	Mount Royal Hotel
Sept 10	IPS: Materials for industry—present and future (0990 23711)	Europa Hotel, W1
Sept 10-12	Institute of Local Government Administrators: Employment—the Local Government Response (0206 45312)	Birmingham
Sept 13-26	Seatrade Academy Anatomy of Shipping (0223 353451)	Cambridge
Sept 15	CBI Introducing single status employment—what's the difference? (01-379 7400)	Centre Point
Sept 15	The Henley Centre for Forecasting Revitalise your market thinking (01-353 9961)	London Press Centre
Sept 16-17	Financial Times Euro-Korean Symposium (01-621 1355)	Brussels
Sept 17-18	The Economist International Oil Supplies and Stockpiling Conference (01-839 7000)	Hamburg
Sept 17	Freight Transport Association National Conference Efficiency in the '80s (0892 26171)	Wembley Conference Centre
Sept 17	Institute of Directors The financial and legal implications of management buy-outs (01-839 1233)	Pall Mall, SW1
Sept 21-23	DIBC UK/Tullett and Riley Foreign exchange and money market dealing (01-788 5126)	Great Eastern Hotel, EC2
Sept 22	IPS Materials Management (0990 23711)	Europa Hotel, W1
Sept 22-24	IBM Planning and control for data processing managers (01-864 5373)	Gatwick
Sept 23-26	International Bar Association The future of London arbitration (01-930 6432)	Waldorf Hotel, WC1
Sept 24-25	FT Conference: The role of South East Asia in World Airline and Aerospace Development (01-621 1355)	Singapore
Sept 28-29	MSS Computer and Business Consultancy Computer appreciation for managers/users (Worthing 34755)	Worthing
Sept 28-29	AMR International Advanced executive secretaries (01-262 2732)	Helsinki
Sept 29	Dun and Bradstreet More effective collection technique for credit controllers and supervisors (01-247 4377)	Café Royal, W1
Sept 29-Oct 1	Thames Water Disposal of Sludge to Sea (01-837 3300)	University College, London
Oct 6	The Henley Centre for Forecasting: The new leisure markets for the 1980's (01-353 9961)	Cumberland Hotel, W1
Oct 8-9	Dept. of Energy Fifth National Energy Management Conference—Energy Conservation—the key to competitiveness (01-211 3000)	National Exhibition Centre, Birmingham

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

FINANCIAL TIMES SURVEY

Tuesday, September 1st, 1981

Road Transport and Distribution

After three years of falling demand for its services, the industry sees little hope of early recovery. Fierce competition for available business forces many carriers to charge uneconomic rates and the consequent lack of finance for new vehicles has obliged manufacturers to cut production.

No relief in sight after three years of hardship

INTRODUCTION

LYNTON McLAIN
Transport Correspondent

ROAD HAULAGE companies in Britain and the owners of transport fleets in manufacturing and retail industries have suffered the worst sustained slump in demand for their services that most managers can remember.

For almost three years, with almost no sign of a let-up, the haulage industry and freight transport services have suffered a declining market with little relief. Manufacturers' stocks of materials and finished goods have been allowed to dwindle as consumer demand has slumped.

This drained the life-blood of the road freight transport industry. Normally robust and hardened transport operators lost confidence as rising numbers of contractors went bankrupt, but not in sufficient numbers for the fall in capacity to outpace the fall in demand.

Rates war

The result has been a rates war, with haulage contractors forced to accept business at uneconomic freight rates or not at all.

Demand for road freight services fell by as much as a fifth last year, according to Sir Robert Lawrence, chairman of the National Freight Company, the state-owned giant of the *road transport industry.* NFC itself entered a period of unprecedented change, with the announcement of Government plans to denationalise the firm.

Mr. Peter Thompson, the chief executive and deputy-chairman of the NFC, subsequently launched an ambitious plan for the management and staff of the company to buy their own company. The outcome of an extensive campaign to sell the idea to staff and the transport unions is expected later this autumn. However, the Government is looking closely at the plans to assess their chance of success in a thoroughly depressed haulage market.

More pessimistic observers, especially those in the Road Haulage Association — whose members, directly involved in the day-to-day business of haulage contracting, are in a position to know—put the decline in business as high as 25 per cent compared with the previous year.

The estimates are bad enough in themselves, but the road freight transport industry — made up of the haulage contractor and the manufacturing and retail companies which operate their vehicles on their own account — entered 1980 with a base level of activities already made artificially low by the damaging road haulage strike in the winter of 1978-79.

The combined effect of that strike and the onset of the deepest slump since the 1930s pushed traffic volumes in the general haulage and parcels sector far below anything experienced in 1975 — generally regarded as the time of the industry's last slump.

Demand, however, failed to pick up in the first half of this year and earlier estimates by the leading companies in the industry—including NFC—that an upturn in demand would start this autumn, have proved so far to be illusory.

Demand may pick up for a short period, but operators will be quick to recognise the seasonal nature of the rise, as shops and warehouses start to fill with stock for the traditional boost to consumer spending at Christmas.

The level of stocks is one of the indicators watched by road haulage companies in their search for business.

The latest provisional figures from the Department of Industry for the level of manufacturers' and distributors' stocks for the second quarter of 1981 show that total stock held was worth £400m at 1975 prices.

This is an estimated fall of about £800m in the value of stock in the first six months of this year, compared with a fall of £1.2bn in the second half of 1980.

Wholesalers, who provide much of the work for road-hauliers and own-account fleets of vehicles, shed stock worth £412m in the whole of last year.

De-stocking amounted to £5m in the first quarter of 1981 and wholesalers' stocks fell by a further £90m, or 2 per cent of the total level of stocks in the second quarter, all at 1975 prices.

Retail stocks fell by about £80m at 1975 prices in the second quarter of 1981.

The impact of the slump in demand for road freight transport services has affected almost all sectors of the industry. Investment by the distributive and service industries in the first half of this year was two per cent below the level of the second half of 1980.

However, investment in the first half of 1981 was approximately 4 per cent more than that in the first half of last year.

This increase, however, can be attributed entirely to higher investment in plant and machinery, which rose by 15 per cent, rather than in vehicles, *where investment fell by 15 per* cent.

Sales of new commercial vehicles were down last year by 11.4 per cent compared with 1979 to a total of 266,219. This fall was modest in comparison with the spectacular drop in sales of the bigger vehicles used for the bulk of road freight transport operations, those above 3.5 tonnes gross laden weight. Sales in this sector *plummeted by 23 per cent last* year compared with 1979 to 61,300 vehicles.

Rapid fall

So far this year, there has been no sign of a halt to the decline in sales of these commercial vehicles. The first half of 1981 saw sales drop 38.5 per cent compared with the corresponding period in 1980.

The fall in demand for road freight transport services in 1980 was made worse by the high sales of commercial vehicles in the previous year, when 300,565 vehicles were sold according to the Society of Motor Manufacturers and Traders.

The new vehicles added to capacity which was already, in 1979, starting to fall out of line with falling demand for road transport services.

In the trailer market, output *by British manufacturers has* also fallen rapidly, from under 19,000 units sold in 1979, to 12,000 last year and an estimated under 5,500 this year.

This slump has had other effects, too. Companies which tended to specialise in particular freight markets, such as steel or other commodities, have been forced by the decline in their traditional markets to bid for any business that is available.

The general haulage market has traditionally been highly competitive, with as many as 46,000 companies bidding for business. It is now even more so, although companies have laid-up vehicles in an attempt to cut their own capacity more in line with demand.

Linked to this cut-back in fleet capacity has been a reversal of power in recent *months in labour relations in* the haulage industry.

The strong stand taken by driver-members of the Transport and General Workers' Union in resisting a pay offer from haulage company management which precipitated the strike in 1979 has been replaced by union members accepting some of the lowest pay settlements in industry.

However, the Transport and General Workers Union has fixed a claim for the new pay round for basic rates of £100 a week for heavy goods vehicle drivers (HGV 1) in the hire and reward sector. The basic pay of these drivers currently *ranges from £78 to £83.*

This moderation this year in the face of a rapidly-shrinking market for road freight transport services was also reflected in the more ready acceptance by union members of the tachograph vehicle — and driver — performance recorder. It will be a legal requirement for tachographs to be fitted to vehicles and used in place of log books from December 31, 1981.

Most goods vehicles over 3.5 tonnes gross laden weight and passenger vehicles with more than 15 seats and not used for regular services are affected.

This date effectively marks the end of the prolonged struggle by Britain against the tachograph.

Britain should have made the use of the tachograph recorder compulsory from January 1, 1976, under EEC regulation No. 1463/70, but failed to do so.

Six other main measures designed to bring British transport law into line with the requirements of the EEC are still outstanding.

On January 1 *this year,* the drivers' hours regulations, the other outstanding measures to harmonise British transport practice with that of the European Community, came into full force.

Under these measures the maximum continuous driving period for coach and lorry drivers was brought down to four hours.

The maximum daily driving period was set at eight hours and drivers were required to drive for no longer than 48 hours a week and no longer than 92 hours a fortnight.

Behind these changes and the severe impact of the recession on haulage operations, other potential changes have been made public by the Government. The most wide-ranging changes, if accepted by Mr Norman Fowler, the Transport Secretary, are the 58 recommendations made by Sir Arthur Armitage in his report on lorries, people and the environment.

The most controversial recommendation is the call for the maximum gross laden weight of lorries in Britain to be raised from the present limit of 32.5 tonnes to 44 tonnes.

Environmental groups such as the Civic Trust and the Council for the Protection of Rural England opposed the proposal vehemently. The Labour Opposition in Parliament opposed the proposal in a motion debated in June.

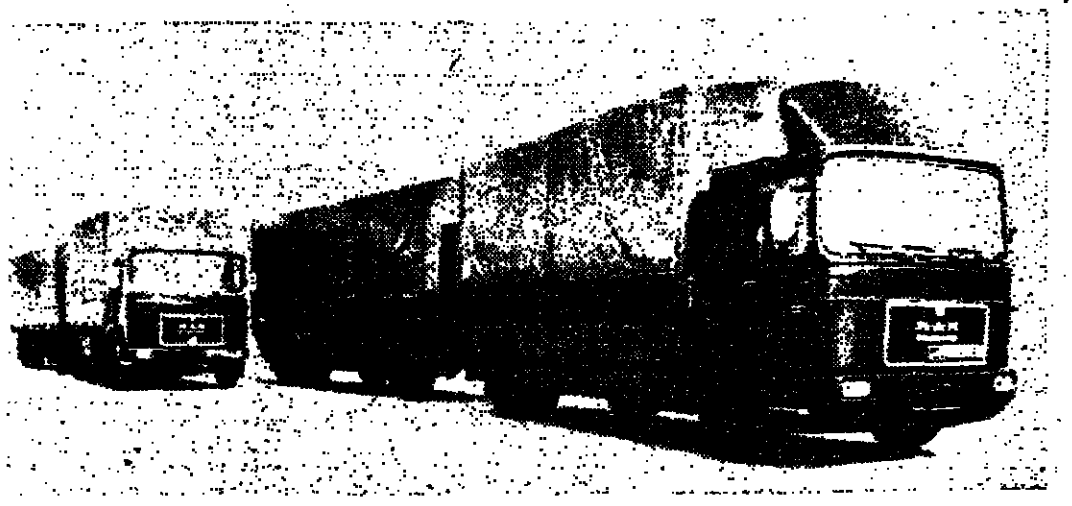
The Government was caught without a considered answer. Mr Fowler responded to the Opposition motion by declaring to the great surprise of MPs that the Government, too, was against 44-tonne lorries and would not bring forward in its response to the Armitage recommendations any proposal for a maximum weight as high as that.

He did not defend his decision to oppose 44 tonnes in detail. He said: "There are some particular worries about this vehicle," and added that "there is much less potential use for these very heavy vehicles, and out domestic commercial vehicle industry is not at present well placed to produce the necessary equipment."

No quick decisions

No detailed analysis of the recommendations of Sir Arthur Armitage has been done by the Transport Department since his report was published in December 1980. Ministers are not expected to make quick decisions about which, if any, category of heavier lorry should be adopted by Britain.

A Government statement may come before the end of the year. However, as any change would not require primary new legislation but could be covered by statutory instruments modifying the existing "construction and use" regulations which affect the size and design of lorries, the Government is not under any pressure to conclude its deliberations on Armitage in time for the Queen's Speech on new legislation in November.



Air deflectors fitted to commercial vehicles produce a significant fuel saving. Right: Sir Arthur Armitage, whose report on lorries, people and the environment recommends the introduction of 44-tonne vehicles. The Transport Secretary, Mr Norman Fowler, considers this weight unacceptable

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Heavy casualties from big fall in orders

COMMERCIAL VEHICLES

KENNETH GOODING

IT HAS been a traumatic year for the UK commercial vehicle manufacturers. And the registration statistics tell only part of the story.

But they were bad enough. Sales of new commercial vehicles fell by 11.4 per cent in 1980 compared with the previous year, to 266,219. At the heavier end of the market, however, vehicles above 3.5 *tons gross* saw *registrations* drop 23 per cent to 61,300.

The steep slide continued during the first half of this year. Registrations fell another 27.6 per cent to 110,195, but again this disguised the much more severe problems for the heavier —above 3.5 tons—vehicles. Sales of this type dropped 38.5 per cent on the first six months of 1980 to 22,514.

The manufacturers' difficulties were compounded for many months by the absence of any replacement parts business. Hauliers were taking what spares they required from the trucks they had parked against the wall because there was not enough work for them. This "canibalisation" seems to have stopped now.

Prices cut

Deep discounting has been the major factor in trading. Manufacturers from both the UK and overseas tried to protect market share by discounting even more heavily and even reducing list prices.

This had the effect, of course, of driving down the prices of used vehicles, making them an attractive proposition for any haulier actually wanting to add to his fleet.

The pound's refusal to show any real decline in value compared with the major European currencies did not help matters either. Any export business the British truck builders found was taken at greatly-slimmed margins.

No wonder the casualty list began to grow alarmingly.

Leyland Vehicles cut 1,400 jobs at the heavy truck plant at Leyland in Lancashire towards the end of last year and then a couple of months ago asked for another 600 volunteers *for* redundancy.

ERF cut its workforce by around 300 and abandoned its ambitious expansion programme which involved a new assembly facility at Wrexham. The company spent £616,000 on the Wrexham venture before deciding to pull out.

Down the road from ERF's plant at Sandbach, Cheshire, Fodens, which had been in a parlous financial state for some time, collapsed under the weight of the recession. Some of its assets were picked up *for £18m by* PACCAR, the American concern which is well known in the U.S. for its Kenworth and Peterbilt trucks.

Fodens was renamed Sandbach Engineering and vehicle output began in a very tentative way again in February.

It was about the same time that Britain's heavy truck industry suffered another major reversal when Seddon Atkinson, the Lancashire-based subsidiary of International Harvester of the U.S., announced it was to cut its manufacturing capacity by about half and make 810 redundant — equivalent to 44 per cent of its workforce.

Seddon decided to close its *assembly plant* at Walton-le-Dale, near Preston, and concentrate its activities at its Oldham factory.

More recently, Bedford, General Motors' commercial vehicle subsidiary, said it could no longer go on attempting to get through the recession by short-time working alone. It has suffered as badly as any other manufacturer from the inflation rate in the UK and the high value of *the pound* which has priced its products out of many overseas markets —and Bedford normally exported 70 per cent of its output.

In July, Bedford called for 2,000 voluntary redundancies.

The recession has not been confined to the UK, of course, and most of the major European markets have also been in decline.

Everywhere there is overcapacity and it was therefore not surprising that the Peugeot group had a hard time finding a partner for its Dodge commercial vehicle offshoot, considered too small to stand alone. The search had gone on for two years and at one stage potentially involved a three-way association between Dodge, Daf trucks of Holland and International Harvester.

In the end, however, Peugeot had to resort to a *"French solution."* Renault's commercial vehicle subsidiary, RVI, acquired half of Dodge and, in effect, took over management control.

It remains to be seen what all this means to Dodge's UK work*force at Dunstable* and Luton.

But the UK truck industry is far from out, even though it is very much down at the moment.

The gradual revival of Leyland Vehicles has continued in spite of the dire circumstances. By May this year, Leyland had launched three of the four T45 truck "families" it is producing at the new £31m assembly hall at Leyland.

First came the top-weight *Roadtrain* models. Then the Constructor for the construction industry. In May, Leyland put the first medium-weight Cruiser vehicles for general haulage on the road. Soon to come are models to take the T45 "families" down to 16 tons.

Even though the really heavy spending is behind it, Leyland *still* expects capital expenditure to reach £430m over the 1981-84 period, although some of this will go to the bus division as well as on trucks.

While the launch of the first T45s was the truck event of 1980, this year Ford took pride of place by introducing the Cargo range to replace the 16-year-old D series.

Cargo is Ford's most important commercial vehicle since its Transit van, also 16 years old, and is aimed at providing the company with a substantially larger share of the European markets for medium and heavy trucks. Last year, Ford ranked fourth in Western Europe in the over 3.5-ton sector behind Daimler-Benz, Iveco (the Fiat subsidiary) and Renault's RVI.

Cargo, comprising 27 models of six to 28.5 tons, involved £125m of investment, mainly at Ford's plant at Langley, Berkshire. This represented just over 12 per cent of Ford's planned £1bn investment in commercial vehicles in Europe in the next five years.

If all goes to plan, about four-fifths will be spent in Britain, which accounts for 98 per cent of Ford's truck production.

ERF and Seddon also have introduced *new models in the* past year or so and the UK-based manufacturers seem well equipped to take on the importers when demand picks up again.

There are conflicting views within the industry about just when that revival will take place and just how low the market will go before the bottom is reached.

Pessimism

Leyland Vehicles in July, for example, presented the highly pessimistic prediction that 1981 truck sales would be only 46,000, or 4,000 lower than the group forecast last November.

Recovery would be slower and at a lower level than previously predicted for the years 1982-83, according to Leyland.

In contrast, the Economic Models group's spring forecast suggested that demand for over-3.5 tons vehicles in the UK this year would settle at around 53,500, representing a near-13 per cent drop on the 1980 level.

However, a recovery to 67,000 (up 25 per cent) was forecast for next year followed by a further rise of 11 per cent to 74,300 in 1983.

If this happened it would take the UK manufacturers out of the worst of their troubles. But the market would *still not* be back to the heights of 1979 when 79,856 trucks of over 3.5 tons were registered.

Some people say that Britain will not see another truck-buying spree like that one for many, many years—if at all.

Soaring costs concentrate hauliers' minds on economy

FUEL EFFICIENCY

JOHN GRIFFITHS

WHEN Sir Geoffrey Howe slapped 20p extra tax on petrol and derv in the Budget there was an entirely predictable howl from the road freight transport industry: at a time when costs were already racing ahead of what the industry could charge for its services, the FTA lamented that £620m would be added to operators' fuel bills in the coming year.

Of that sum, £270m was put down to derv for trucks; the other £350m for the extra fuel costs of vans and business cars.

Sir Geoffrey, in the end, decided the FTA was not howling wolf and chopped the increase on derv to 10p a gallon. Simple arithmetic should mean an on-cost for trucks "proper" this year therefore, of £135m. Not so. The cut has been more than offset by the steady surge of fuel prices since then, say operators.

Last year, the industry claimed its costs rose 20 per cent. But with 15-25 per cent of transport fleets laid up as Britain wallowed in recession, the most that operators fighting tooth and claw for business could squeeze out of their customers was an extra 5 per cent on rates.

This year the picture is no better. Costs in the first half have risen, according to the FTA, by a further 13 per cent; rates by only another 5 per cent.

With fuel accounting for between roughly 14½ and 16½ per cent of the total cost of buying and keeping a truck in operation, it is little wonder that the haulage industry is now looking for every last chance to save fuel, as are vehicle manufacturers.

There are various ways in which the haulage industry itself can make savings. The Transport and Road Research Laboratory estimated, for example, that trucks spend about one-third of their mileage empty — returning from a delivery, for example—and about 10 per cent of that is simply due to a lack of information between, and even within, operating companies about possible loads which could be carried. Even three years ago this lack of information was estimated to be costing the industry £10m a year; the figure this year is probably approaching twice as much.

70 centres

BRS is attacking the problem with its Datafreight system, a computerised operation designed to bring hauliers and loads together. It has been running for about a year and there are about 70 centres. People wanting goods to be moved simply ring the terminal, as do operators.

Undoubtedly, too, a move to higher gross truck weights would save fuel. Again, the TRRL estimates a potential fuel saving of 7-10 per cent per tenne of payload using 38½ tonnes gross vehicle weight trucks against the current maximum 32.5 tonnes. But Transport Secretary Norman Fowler has set his face against 44 tonners and their potential for fuel saving of up to 15 per cent per tonne of payload.

Less easy to quantify are the savings which could come from better self-discipline among operators: comprehensive preventive maintenance, and the education of drivers into more economical habits of driving. Improved truck aerodynamics are allowing higher speeds to be reached, when the real intent is to use less power, and hence less fuel, at traditional speeds. It is self-defeating to throw away the potential for fuel saving by an extra 5 or 6 mph on the motorway.

That still leaves a big role to be played by the truck makers themselves: in engine and transmission development, and two other notable areas: weight-saving and aerodynamics.

Development of the diesel in search of greater economy has accelerated since the onset of the first fuel crisis in 1974. But it is likely that, without substantial investment in major innovations which are not yet economical, we are now in a phase of diminishing returns in terms of what can be wrung out of existing turbocharged, direct injection truck engines. In the short term, it is widely felt that not much improvement above 5 per cent in fuel efficiency can be achieved compared with current economy truck engines.

Minimising frictional losses, improved combustion and the reduction of heat losses will all play their part in the medium to long term. But fuel prices still have some way to climb before operators are likely to get into a mood to pay for them.

More than half of the energy content of a truck's fuel load goes into cooling and exhaust losses. While the exhaust gases are used to drive the turbocharger compressor on current engines, a second turbine connected in series could be coupled to the crankshaft itself, allowing the remaining exhaust gas energy to help turn the engine directly.

Several manufacturers are already developing such "bottoming cycle" techniques. But they are expensive.

So is the other significant development on the horizon: adiabatic combustion, in which cooling systems are eliminated. This involves insulating the complete combustion chamber—and finding materials which can withstand the very high temperatures inevitably generated. The answer appears to lie in high-strength ceramics which, however, are still very much in the development stage. Development is being helped, however, by that fact that Ford and GM are hard at work on developing gas turbine engines destined to have their principal components made in ceramics, and Ford expects to have a final prototype ready by 1985.

The gas turbine itself, with its particular advantages of low pollutant emissions and ability to run on a variety of fuels, may emerge in the 1990s as a rival to the truck's turbo-diesel. But no-one is counting on it. In the meantime, subject to the constraints of cost and the setback which may be encountered by any tightening of emissions legislation, it is predicted that applying the radical improvements described to the diesel could produce fuel economy gains of up to 12 per cent on current engines.

Big saving

There are shorter term gains, however, not least in aerodynamics. MAN, for example, estimates that the proportion of overall fuel consumption needed to overcome aerodynamic drag is about 30 per cent on a conventional 38 tonne vehicle. Without aerodynamic aids, this translates to 12-15 litres of fuel per 100 km. Fitted with a front air deflector, bumper air dam, and fairing on both tractor and trailer, MAN claims a drop of 3 litres per 100 km. With just the air deflector and front apron, it found a fuel saving of 1.4 litres per 100 km—far from inconsiderable.

Overall, Britain's Society of Motor Manufacturers and Traders estimates that such equipment could lead to consumption improvements of up to 15 per cent at main road cruising speeds.

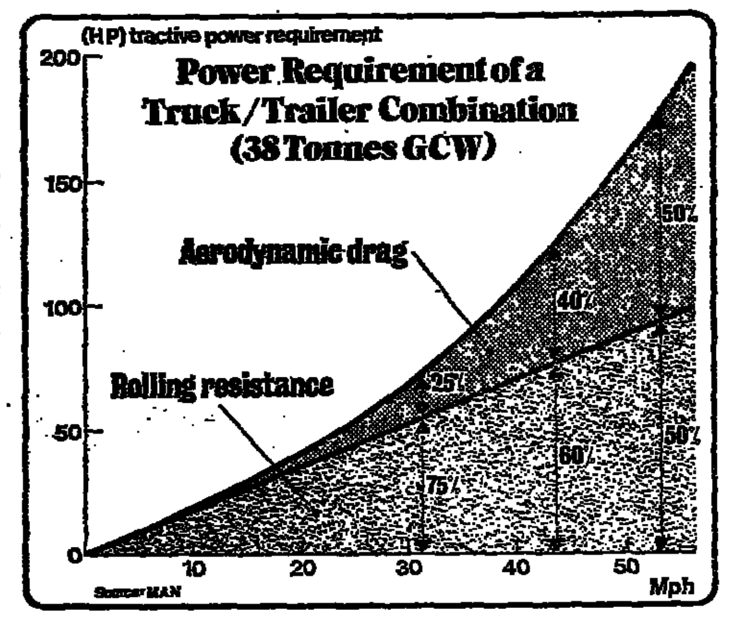
But there are pitfalls. They must be properly designed and fitted, because it is not a simple question of smoothing out airflow from the front. Scania, conducted tests which led it to conclude that side winds must be given major consideration—on the basis that an airflow angle of even 5 degrees from the fore to aft areas increases drag by 28 per cent, soaring to 68 per cent at 10 degrees.

Transmissions are also being better matched to engines, with a general raising of gearing.

Cummins, for example, found that gearing up a given engine to propel a truck at 60 mph at 1,700 rpm instead of 1,900 produced a 6½ per cent improvement in fuel economy. It also enabled the truck to travel more quickly — a clear temptation to the driver. Hence the proliferation of engine speed governors.

Associated Engineering Group says its research has shown that a 10 per cent improvement in journey time could cost 20 per cent extra in terms of extra fuel and increased wear and tear, and that the maximum time saving in a normal shift would be 30 minutes to an hour—of little use except in the unlikely case of that being fully used for earning extra revenue. The answer, it suggests, is its automatic cruise control which can be set to speeds giving maximum economy. It also includes a maximum allowable speed.

Weight-saving is the other significant element, with makers paring down wherever they can. ERF, for example, has chassis rails of an unusual C-section in which strength is provided by thick horizontal edges to a thin vertical beam, rather than a uniform heavy duty section, while both plastics and aluminium, are being tried as alternatives—or at least partial substitutes—for the traditional steel cab.



Transport shortage may follow end of recession

ROAD HAULAGE COMPANIES

LISA WOOD

DURING THE past 18 months an estimated 25 per cent of Britain's haulage vehicles have been taken off the road.

Mr Bob Duffy of the Road Haulage Association, whose membership has fallen by 1,000 to 15,000 this year, said companies had either laid-up vehicles, gone out of business, or been declared bankrupt.

The contraction, said Mr Duffy, had been across the board, affecting both larger companies, with more than 20 vehicles and the smaller ones which tend to be more involved in general haulage work.

Change of attitude

The pressure by customers to keep rates down in an extremely competitive market had, said Mr Duffy, more serious effects than the immediate cash-flow problems it placed on contractors. "Hauliers are finding it very difficult to replace vehicles," said Mr Duffy "and are extending their lives." Unless customers are careful they will find suitable transport will not be available when the recession ends."

Imperial Chemical Industries used to operate an unofficial system whereby it negotiated increased allowances if hauliers' costs, such as fuel, increased during a contract. But over the last 12 months there has been a shift in attitude and the eight divisions of ICI agreed nine months ago that for the foreseeable future rates would not be renegotiated if costs rose unexpectedly during a contract.

ICI, which employs some 700 contractors throughout the country, provides an interesting case study vis-à-vis trends in those companies which have decided to retain "own account" fleets.

In terms of tonnage moved by road, ICI uses its own fleet for about 10 per cent of activity, the criteria for holding such a fleet being on safety grounds. Particularly hazardous chemicals, ICI believes, are best handled in its own vehicles and by its own drivers. As volumes transported have decreased over the year this fleet has been retained, with the diminishing element being contract hire.

ICI used to contract-out work for up to five years. In 1976 for example some 25-30 per cent of its tonnage carried by road was carried by contractors. Today the percentage is about 15. As contracts expired, a significant percentage of operators, some of whom had vehicles specifically designed for ICI but who had a guaranteed income, had their contracts waived.

The aim was to keep ICI's own fleet moving and whatever business was left was increasingly offered on "spot hire." ICI has tried not to axe completely individual carriers, preferring to spread the cuts in business across the board. ICI transports some 15 per cent of its tonnage, which has been reduced over the last year by some 30 per cent in tonne miles, by rail, and this percentage has increased.

Two years ago a Price Commission report said: "Within the principal sectors of the industry there is considerable scope for specialisation by individual operators in a way that can have the effect of reducing the amount of competition which they have to face."

Arrested

Until the last couple of years, this had been a strongly growing trend in the industry, but according to Mr Duffy this specialisation has been arrested by the recession. "Specialisation has been delayed because of the recession," said Mr Duffy. "At present there is a feeling that contractors will carry anything provided they can keep their businesses going."

However, the recession which has forced manufacturing companies closely to scrutinise overheads has benefited some existing specialist carriers.

George Bassett, the sweet manufacturer, earlier this year was in some financial difficulty and ridded itself of its own vehicles and contracted out the work to BRS.

Mr J. A. Harvey, group marketing director of the haulage company SPD said there was a crisis of confidence between the industry, its bankers and customers. "In the last 18 months every sector of the industry has suffered, but in particular that of parcels and general haulage which have all under-recovered on inflation."

He said that the retrenchment among "own account" fleets was becoming an increasing percentage of SPD's business but this was of no great economic benefit because of the very high fixed costs.

As far as SPD is concerned the excess capacity in the industry has already been squeezed out. Mr Harvey said: "Increasingly, customers will find there is no capacity to buy. Contractors are having to say we want this or that price or we cannot do business." In the last couple of months he said some customers had recognised the desperate shortage of capacity and were attempting to gain contracts with hauliers.

Specialist services offered by SPD most affected by the recession include its parcels service, the "care sector" which includes the handling of china and glass where demand is very low, and SPD's specialist distribution and sales support services as customers' stock levels are lowered.

SPD, like other contractors has had to "embrace marketing" in a fashion it has never done before.

But companies' attempts to keep costs down at a time when customers are loath to pay more could be severely jeopardised in the autumn with the prospect of large wage demands coupled with a reduction in hours from 40 to 35. "That sort of a demand in an industry in its present situation is ridiculous," concluded Mr Duffy.

Management gains the upper hand on pay

LABOUR RELATIONS

NICK GARNETT

GENERAL road haulage has witnessed over the past year one of the most dramatic reverses in the relative power of management and unions.

A series of very high pay settlements, following on from the big lorry drivers' strike towards the end of the last Labour Government, continued into the first year of the present Government.

The effect of the recession, however, and its impact on the bargaining power of the Transport and General Workers' Union, has probably been more marked in general road haulage than in any other industry.

Four features have been particularly noticeable in road haulage labour relations.

First, pay settlements for this year have been some of the lowest in industry. Under the pressure of company closures, laid-up lorries, and declining work, settlements have tended to range in the "hire and reward" sector from 3.2 to 6.7 per cent.

The class one lorry drivers' new basic rates for 40 hours range from about £78 in South Wales, through £80 and £81 in London and a number of northern areas to £83 in Scotland, traditionally one of the highest paying regions. The Liverpool, West Midlands and North Western regions effectively came to no agreements this year.

The highest daily subsistence allowance negotiated this year is £9.75 in the Metropolitan and South-Eastern areas and the lowest £8.75 in South Wales.

Nine regions of the Road Haulage Association have 40-hour guaranteed weeks with at least four having a guaranteed week of 40 hours at basic rates and five hours at overtime rates of time and a half.

Secondly, the TGWU has reversed its position on the tachograph vehicle and driver performance recorder.

The union had adopted a policy of non-cooperation towards the device. Its national road transport committee agreed in January however to allow its regional negotiators to seek extra payments from employers where they can for cooperating in the full use of the instrument. The union's earlier policy was aimed at preventing companies from using the tachograph other than as a visual check on performance.

The committee's decision appeared then to have cleared the way for the full use of the tachograph, which becomes compulsory as a recorder for lorries of more than 3.5 tonnes from December 31 this year.

The committee made no recommendations on the kind of money claims that should be sought, although some negotiators have suggested payments of £3 to £5 a week per man.

Push expected

Indications are that agreements on extra payments have been slow in forthcoming. The policy of the Road Haulage Federation is not to concede extra money at regional level. Member companies though are free to sign deals if they are able to use the device as a real way of measuring and improving productivity. Road hauliers are expecting a big union push on money claims related to the tachograph in the next bargaining round.

Thirdly, association officials have shown considerable anxiety at the possibility of wage under-cutting by some companies as a result of recent government labour relations legislation.

This has scrapped Schedule 11 of the previous Government's Employment Protection Act and with it the remaining provisions of the 1938 Road Haulage Wages Act have also been repealed. This has meant that companies are not obliged by law to offer the same basic terms and conditions as exist in the same industry and the same area.

The association, accepts that some hauliers in dire financial difficulties might have to pay less than the regionally-agreed rate and says local TGWU officials have co-operated in this.

Some association officials say the repeal of legislation has been used by some hauliers to undertake reductions in agreed pay rates to help obtain vicious rate cutting. This, they say is helping to undermine an already precarious position for many other hauliers.

Finally, many of the major oil companies have recently secured very substantial efficiency deals with their workers in road distribution and in airport fuel terminals and some lubricant centres. These deals, secured by BP, Shell, Esso and Mobil among others have been the culmination of long and arduous attempts by the companies to improve productivity.

In the case of Mobil, the deal involves tightening the standard hours or times which the company and union agrees each specific job should take. There has been no reduction in the workforce, however.

Deals struck by most of the other companies involve not only tightening time-based work standards but also reducing the workforce. The BP deal, for example, improved work standards by 10 per cent together with an average 2.5 per cent improvement in performance at the terminals through a reduction of "non-productive" time. As part of the deal, the company's workforce of 2,100 in these services is being reduced by 225.

Payments accruing from these efficiency deals have lifted the basic pay for tanker drivers up to close on £130 a week with possible weekly earnings of about £180.

Report suggests possible saving of £2bn

DISTRIBUTION MANAGEMENT

LYNTON McLAIN

THE CHIEF executives of 5,000 British companies were given the chance, in a survey in the summer, to find out if they were sitting on potential gold mines of untapped ways of cutting costs and improving efficiency.

The potential gold mines lay deep in the largely uncharted territory of industrial distribution costs. These costs account for a staggering £40bn or more of the total costs of running Britain's industrial, commercial and retail companies.

The survey to find out the current costs and practices of industrial freight transport, distribution, warehousing and packaging was launched in May by the Centre for Physical Distribution Management. The centre is part of the British Institute of Management and the ultimate aim of the survey of companies is to produce a "formal index against which companies can monitor and measure all future trends in physical distribution costs."

Few companies at the moment have a detailed idea of their distribution costs, according to the Centre for Physical Distribution Management.

These costs are in many cases avoidable, or at least reducible, but if the top management of a company simply does not know the source or scale of these costs, clearly it can do little or nothing to tackle them systematically with the aim of improving cost control and raising efficiency.

One of the major achievements of the National Survey of Distribution Costs, if chief executives respond to its challenge, will be this identification by top management of the costs of such activities as transport, warehousing, materials supply, including stock control, order processing and packaging.

These are all activities which are peripheral to the main activities of manufacturing companies, but the potential for cost savings is so enormous, according to the CPDM, that once these costs are identified few chief executives could sensibly avoid action to achieve savings.

British industry and commerce moved a total of 1,822bn tonnes of goods and freight by road, rail, coastal shipping, pipeline and inland waterway in 1979, according to the latest available government figures. The cost of these movements was enormous and the Department of Transport estimated that all freight transport activities cost £14.121bn in 1979 (28.5 per cent up on 1978), with 95.7 per cent spent on road transport.

These figures represent the expenditure by users on transport.

However, the costs of transporting freight are only a part of the total industrial costs of distributing goods and materials in Britain. A study by the CPDM shows that in Britain, transport accounts for an estimated 34.4 per cent of the total cost of distributing goods.

Change expected

Warehousing accounts for a further 15.6 per cent of total distribution costs, receiving and despatching of goods accounts for 3.1 per cent, stockholding accounts for 15.8 per cent, administration of distribution accounts for 12.5 per cent, packaging accounts for 12.5 per cent and other forms of processing for distribution account for 3.1 per cent of total distribution costs.

The breakdown of these costs is expected to change considerably by 1990, with transport likely to account for 44 per cent of total distribution costs and packaging accounting for 14 per cent. Administration costs are expected to be trimmed and stockholding costs are likely to fall to 12 per cent, reflecting a move towards suppliers holding a greater proportion of stock than at present.

The figures given by the CPDM for distribution costs will be updated by the current survey of companies, and the Centre intends to monitor continuously distribution costs in industry and commerce and update data each year. An index of performance and cost in each of the full list of 133 Standard Industrial Classifications, in 26 main industrial groups, will be made available to enable companies to identify accurately their own performance in cutting distribution costs in relation to the performance of their industrial sector as a whole.

The scope for cost savings in distribution was illustrated by a report last year prepared by A. T. Kearney, management consultants, for the CPDM. Kearney showed that at least £2bn could be cut from the distribution bill of UK companies if all companies achieved the same levels of improvement in the productivity of distribution shown by the companies in the survey.

The companies surveyed for the Kearney report had combined annual sales of £8bn and represented 2 per cent of all goods sold in Britain, but the respondents estimated their average distribution costs to be 9 per cent of total sales value, an underestimate according to the Kearney report, which suggested that the companies had a restricted and narrow view of physical distribution.

The true costs of physical distribution were estimated by Kearney to be nearer 17 per cent.

The results of the 1981 survey of industrial and commercial physical distribution costs are expected to be compiled later this year. Individual companies in the survey will get their own results in graphical form, with a summary of the cost data relating to a national breakdown of physical distribution into transport, warehousing and other cost areas, in their own standard industrial classification.

The final report of the survey is then expected to be published in a report towards the end of the year. This will be presented at a national conference on distribution costs to be organised by the CPDM.

Volume of leasing business continues to grow

FINANCE

DAVID FREUD

THE ALTERNATIVES for financing company fleets have been an area of great change over the last decade—mainly due to the opportunities opened up by leasing. It is only in the last year or so that the legislative background has stabilised. But competition to provide finance remains intense and fresh packages are introduced almost daily.

The choices range between leasing, hire purchase, instalment credit, the issue of debentures, raising medium-term loans and even issuing equity. With the costs of running a fleet now taking a large part out of many companies' available cash, it is usually a good idea to seek professional advice in obtaining the most advantageous alternative or mix.

Leasing is the alternative that has grabbed all the headlines in recent years, due both to its rapid growth and to the official concern surrounding the increase in its use. The main controversy was over the use of leasing for company cars as opposed to commercial vehicles. The 1979 and 1980 Finance Acts undermined the tax advantages of leasing cars, so it is hardly surprising that there has been a sharp setback in the volume of car leasing undertaken. However, the benefits of leasing commercial vehicles remain unchanged and volume here continues to grow.

The popularity of leasing has been based on the tax system, which after 1972 allowed buyers of assets to claim 100 per cent relief in the year of purchase. Businesses such as banks, which would not normally buy anything like sufficient assets to match profits for their own use, soon began to buy assets—usually plant and equipment—and pass them over for the use of manufacturers and others through a leasing agreement.

Shared incentive

In practice, this has meant that the investment incentive was shared, through the rates, between the lessor who was deferring his tax liability until he has to pay tax on his rental income (which he could use to finance further leasing deals) and the lessee for whom the rental would be much lower than the interest rate burden of buying outright.

The growth rate for all leased assets is indicated by the figures of the Equipment Leasing Association, whose membership is dominated by the big banks and which claims to account for up to 90 per cent of the market. In 1971 the annual leasing undertaken by ELA members was £159m; by 1980 it was £2.4bn. Of this total, commercial vehicles accounted for £114m in 1977, rising to £291m in 1980.

If a company has no taxable income of its own to set off against its investment in commercial vehicles—or even if it has no ready cash, the advantages of leasing are clear enough. It shares via the monthly leasing rental, the tax benefits of the transaction obtained by the lessor.

However, the position is considerably more complex when it comes to car fleets. Here the only companies which can obtain 100 per cent capital allowances are car hire firms. All other commercial and industrial companies using cars must put on their thinking caps to work out the most advantageous financing method.

Until recently there was a key distinction between contract hire and leasing. However, with changing legislation, that distinction has now worn rather ragged. Contract hire in cars initially became popular with companies because it allowed them to budget for an exact amount each month, leaving concerns about repairs, maintenance and subsequent disposal to the hirer. However, it was a poor device in cash flow terms because until June 1977 a third of the contract had to be paid in advance and the remainder over two years.

At the same time the method tended to be rather expensive, because the hirer would tend to build in a cautious estimate of the residual value of the vehicle. If it exceeded the estimate, which was generally the case in an inflationary climate, this added up to extra profit for the hirer.

Meanwhile, the looser credit controls of 1977, combined with a 1975 ruling by the special commissioners for taxation allowing cars to be treated like other items of capital equipment, had allowed car leasing to take off. From £6m in 1976 the ELA figures rose to a peak in 1979 of £468m.

Government and Inland Revenue, dislike of this use of a policy designed to promote capital investment was exacerbated by some of the fringe schemes that initially mushroomed. So it was not surprising that the 1979 and 1980 Finance Acts made the capital allowances for leased cars the same as those for purchased cars, at 25 per cent. Accordingly, the car leasing total for 1980 fell back from £468m to £267m.

So with the tax treatment equalised, the distinction between contract hire and leasing has narrowed appreciably. The main distinction is that the dealer takes the risk on residual values in contract hire, while the risk is shared in the case of a lease. The same goes for maintenance costs. However, new forms and distinctions are being invented all the time.

There is still a tax distinction between leasing or hiring on the one hand and outright ownership on the other. This concerns cars over £8,000. The maximum capital allowance on a car is £2,000. However, there is another tax formula which affects companies hiring or leasing cars worth more than £8,000.

Balanced

A formula limits the amount that can be offset against tax to half the relevant rental proportion above £8,000. This is a permanent tax disallowance, while the £2,000 capital allowance maximum is temporary: nevertheless, the tax benefits of the two courses can be finely balanced at different values above £8,000.

But whether hire or lease, on a fee basis or with residual risk, the main advantage is in terms of cash flow. If a company has taxable capacity of its own, however, it may prefer to purchase outright. Often this can be done within cash flow—and if it can, the case for outright purchase must be strong. If it cannot, new finance will be required, either through taking on debt or equity.

The bank is the first place companies turn to for outside finance. But, while an overdraft is suitable for short-term debt, it may not be the best vehicle for an investment with a life of about five years. So banks may direct customers towards term loans more directly linked to the life of the assets acquired. It is noticeable how the clearers have followed the lead set by the merchant banks in offering loans at variable rates rather than at the more traditional fixed rates.

A quoted company can try to raise capital directly from shareholders by way of a rights issue. However, shareholders would be suspicious of a company that required a capital injection to maintain its ordinary level of business, and the company would have to argue it needed the funds for genuine expansion. Otherwise the cost of the issue in terms of dividend is likely to prove high.

Another alternative is loan stock convertible into equity after a period of years, a device that seemed to be regaining popularity last year, with companies as diverse as Rio Tinto Zinc and Arthur Bell resorting to it. On the other hand, there are no great signs of debentures, a traditional form of debt financing that has been out of favour for a decade, making a comeback.

Matching vehicles to the loads

COMPUTERS

ALAN CAIN

OF THE two billion tons or so of freight moved in the UK each year, some 83 per cent goes by road, according to the Ministry of Transport.

Of all the freight vehicles on the road at any one time, 30 per cent are empty, simply moving from pick up point to pick up point or returning to the depot.

Discounting tankers and refrigerated vehicles, estimates in the industry suggest that some 30m gallons of fuel a year could be saved by efficient scheduling.

The obvious answer is to construct a vehicle scheduling algorithm (a sequence of steps to solve a specific problem) turn it into a computer program and run it on a computer.

This is simple in theory (like most computer programs) but complex in practice. Some 20 years after the first scheduling algorithms were constructed by the researchers Clarke and Wright of the Co-op, mature systems are only now making their value felt in the market place.

Falling cost

Part of the problem has been the difficulty of writing the right kinds of programs for the diversity of freight handling businesses there are; the other has been the cost of the hardware, the computers themselves and the visual display terminals used to communicate with the computers.

Now with the advance of microelectronics, the cost of that hardware is falling so rapidly that most of the principal vehicle scheduling system suppliers aim to run their system of a minicomputer — or even a micro. (Remember, these are large, complex programs with a mass of arithmetical operations to handle.)

The principal suppliers are well established. They include the computer bureau Tempo with "Datafreight," Analytical Systems with "Routemaster," Scicon with Vanplan, Pactel with "Paragon" Synergy Logistics with Transit and IBM with VSPX. There are others; each vendor emphasises that their package has its own unique feature. No matter how fiercely they defend the virtue of their own offering, they declare they are not in direct competition with the others.

Roadline—a transport company that is making increasing use of computers for the control and planning of its distribution operations

"Datafreight" is designed to help the scheduler match vehicles and loads. It is run by Tempo on its Systime computers in Soho Square, London, for British Road Services. Terminals are established in each of BRS's 150 or so depots and information reaches the scheduler directly from the drivers and clients over the telephone. The driver checks in before he leaves; by the time he reaches his destination, the computer system has worked out where he should next call to pick up a new load and his best route back.

According to Mr Joe Frazer, marketing director for Tempo, "the system is available to all fleet operators. For £50 or so a year, they can have their vehicles included on the database."

Routemaster is a scheduling system for companies with a vehicle fleet and daily deliveries and pickups. Mr Geoffrey Crocker of Analytical Systems says the system is used by more than 30 companies including Marley Transport, Unilever, Whitbread, Canning Group and Allied Breweries.

The system was written basically by Mr Mike Digby, who set out in the later 1960s to improve the Clarke and Wright algorithms.

It took seven years, but now Mr Crocker claims that the system will undertake daily scheduling of vehicles and loads and will allow the scheduler to interact with the system.

It now runs on a series on minicomputers including the IBM Series/1 and the Hewlett Packard 3000 (the writers have managed to compress it into only 64K user bytes). It is used for everything from controlling vehicle movement (Canning Group used it to control four vehicles a day and were able to dispense with a depot at Watford) to school bus services.

At Scicon, Mr Brian Hume, distribution projects manager, places the emphasis on interactive working—the facility to disagree with what the computer has laid down and to do something different.

Policy studies

He cites the example of whether to use an articulated lorry to deliver down a long alley. The computer would say "No," but if an artic was all that was available, it would have to do. Equally, the scheduler would know when to break the rules on afternoon deliveries, problem solutions that are very difficult to build into the master program.

Paragon, developed by the operation research side of Pactel (the computer and telecommunications arm of PA International) is designed to carry out daily scheduling, weekly scheduling, fixed route planning and to cater for the needs of policy studies — planning new depots for example or updating delivery areas.

Like many of the others, it uses a computerised version of the Ordnance Survey map of the UK as a database. It calls it Roadmap; Synergy calls it Roadnet.

All the vendors emphasise the importance of consultation. Analytical Systems charges £2,000 to £10,000 for the work leading to a package leased for £6,000.

The packages, in fact, typically cost around £6,000 a year to lease providing you have your own computer. (Tempo, of course, provides bureau service.) Mr Hume points out that Vanplan runs on a HP 3000 costing around £22,000, making it economic for a large company to have one in every depot.

Savings are typically 10-15 per cent of distribution costs. For some systems, 10 vehicles and above is the point at which it becomes economically sensible to use computer based scheduling.

For the future, many suppliers are looking to integrate vehicle scheduling with other stock and materials handling systems. Scicon will launch its effort, SDS 3000, next month.

Cutting fuel bills a major priority

RESEARCH

ELAINE WILLIAMS

THE Transport and Road Research Laboratory has a very wide brief and its activities vary from developing new information systems such as Carfax, which may one day provide motorists with up-to-date travel information over the radio, to studies into the social benefits of quieter vehicles on Britain's roads.

Often the laboratory's work provides an example to industry where major improvement in vehicle safety and design can be made.

Noise problem

In the field of commercial vehicle use and design, the laboratory's work can be broadly classified into three areas; environmental, energy conservation and safety.

One of the major criticisms of commercial vehicles is the damage they cause to the environment through noise, exhaust fumes and weight.

Work carried out by the TRRL shows that with suitable redesign of the engine, noise can be cut considerably and there are already regulations which keep vehicles' noise output to 80 decibels or less.

At present, the UK Government continues to ban the introduction of 44 tonne lorries—with the present maximum loading being 32.5 tonnes. However, pressures from Britain's EEC partners will mean that the loading of UK lorries will eventually increase despite the outcry from environmentalists and conservationists.

TRRL has carried out many studies to establish the effect of heavier lorries on UK roads. Broadly, the laboratory says that providing the axle loading—it is this which causes most of the road damage—is kept to that suggested by the EEC draft directive, road damage could be less than at present in Britain.

Commercial vehicles account for about one-third of the fuel used by road transport so it is no surprise that making fuel savings is one of the main preoccupations of the Transport and Road Research Laboratory.

Fuel costs account for about 17 per cent of a vehicle's total operating costs and the need for fuel economy measures is further enhanced by the fact fuel prices are likely to rise faster than other prices.

There are many factors which affect energy consumption varying from the state of the road, tyre drag, aerodynamics of the vehicle, engine size and performance, to the way in which the vehicle is driven.

The TRRL uses computer simulation to try to unravel how these factors interrelate and what can be done practically by industry.

For example, a study published in 1979 showed that a 32-tonne articulated lorry could give better fuel performance—a 17.4 per cent improvement—if its engine was governed at 1,900 rpm instead of 2,100 rpm; if it were fitted with a thermostatically controlled fan, if it had 10 per cent or less unladen weight and had 20 per cent less air drag.

But a driver can lose many benefits by going round too many bends or driving up and down hills. According to TRRL, even a modest gradient of 4 per cent can triple the fuel consumption.

Options

The effect of air drag on fuel consumption is also considerable. For example, at 60 mph a 16-ton gross truck with no load consumed 11.77 miles per gallon, but when carrying a container fuel consumption fell to 9.4 miles per gallon. With the addition of an air deflector plus the container, consumption improved again to 10.46 miles per gallon.

Though the TRRL is concerned mainly with the conservation of energy in the short term—the next 20 years or so—it is also looking at the options for transport into the next century.

This includes investigating synthetic and other alternatives for fuels once oil is gone. TRRL considers the most likely option to include electricity from nuclear or renewable sources, or a synthetic liquid fuel made from coal.

The TRRL is an advocate of electric vehicles and has monitored several experiments which have been carried out over recent years. TRRL admits that before electric vehicles can be considered an acceptable alternative transport system there is a number of wide issues which have to be investigated.

For example, the range limitation of electric vehicles would lead to considerable changes in the pattern of transport demand. However if it were possible to produce a synthetic liquid fuel the next century's transport system would be little different from today's.

Fowler expected to opt for a 40-tonne maximum

HEAVY LORRIES

LYNTON McLAIN

"LORRIES HAVE become not merely one possible method of transport. Entire distribution systems and indeed industries have been built around lorries and could not exist in their present form without the lorry. Some factories depend on frequent and precisely timed deliveries by lorries to such an extent that the lorries can be regarded as an extension of the production line."

Sir Arthur Armitage, Report of the Inquiry into Lorries, People and the Environment, December 1980.

"LORRIES CAUSE nuisance and the overall consequence of the growth of the movement of freight by road has been a deterioration in the environment in which people live. The continuing increase in the use of larger lorries means that problems are getting worse in larger towns where bypasses are ineffective and that the prospect of quieter lorries cannot by itself be used to argue that the overall position will improve. The lorry nuisance has not been curbed but instead is growing worse."

The Civic Trust, evidence to the Armitage Inquiry.

TO PEOPLE involved with commercial vehicles, users and manufacturers, the comments from Sir Arthur in the report of the most recent inquiry into the relation between lorries, people and their environment spell out the truth about the lorry and its role in British industry in the late 20th century.

To others, however, Sir Arthur's observations spell out only one side of a fierce debate, in which environmental groups and supporters believe the role of the lorry has been that of villain rather than hero, by damaging the environment and shattering rural peace.

In his report, Sir Arthur attempted to reconcile the worst fears of the pro-lorry lobby, who wanted 44-tonne vehicles with the minimum of environmental control, with those of the environmental groups who urged that Britain's lorries should be kept down to the present 32.5 tonnes maximum gross laden weight, as well as more controls of noise, pollution and vibration.

The report has a list of 58 recommendations, ranging from a call for the Government to establish "lorry action areas" where local authorities would have powers and finance to help ameliorate the worst effects of lorries, to the call for a range of new legal lorry weight limits, up to a new maximum of 44 tonnes for a six axle lorry.

This recommendation for a rise of 35 per cent in the maximum weight of lorries allowed on Britain's roads turned out to be the most controversial change called for by Armitage.

The division of opinion gaped wide between the pro-lorry lobby, supported as expected by the ranks of the Road Haulage Association and the Freight Transport Association and the environmental lobby led by the Civic Trust and the Council for the Protection of Rural England, Friends of the Earth, Transport 2000, the pro-rail group and others.

The CPRE insisted in May that "official attempts to convince the British public that heavier lorries will be good for them are failing." The council and four other national organisations printed and distributed almost 250,000 leaflets proclaiming opposition to the proposal to raise lorry weight limits to 44 tonnes.

The environmental groups refused to accept the Armitage recommendations for eight main reasons but their attack was based largely on a comment made by Sir Arthur himself when he introduced his report in December. Sir Arthur insisted that his 58 recommendations "are not a package." The proposed increase in weights to 44 tonnes was not conditional on the implementation of the other proposals which were concerned with reducing the impact of lorries on the environment. This was "totally unacceptable," the groups said.

The opposite view was taken by the Road Haulage Association, representing 15,000 road haulage contractors, and by the Freight Transport Association, representing the transport interests, mainly on the roads, of British industry and commerce.

The FTA immediately welcomed the report, calling it a "£500m a year tonic to industry." The FTA said that to increase maximum lorry weights would reduce the number of the heaviest lorries by 10,000 in the short term and 15,000 after 10 years, with a saving of £250m a year. Improvements in speed limits on better dual carriageways would aid productivity and save a further £225m a year, the FTA said.

Rising

Sir Arthur estimated the savings to industry in reduced transport costs arising from the use of heavier lorries at between £120m and £130m a year rising to £170m to £190m a year by 1990. The heavier lorries he proposed would cost more to buy and to run than lighter lorries, but it was their ability to carry a greater weight of goods that led to the savings.

A lorry of 40 tonnes maximum gross laden weight could carry a load more than 25 per cent heavier than a 32.5 tonne lorry could carry.

Sir Arthur accepted the necessary conclusion from such a statement that fewer heavier lorries would be needed to carry a given weight of goods. However, as the State-owned National Freight Company, Britain's largest operator of lorries pointed out in its evidence to the Armitage inquiry, "the cost savings of heavier lorries can only be achieved if they are fully loaded."

The NFC estimated that only 35 per cent to 40 per cent of all the goods movement by road in Britain went by fully loaded, maximum capacity, 32.5 tonnes vehicles. The company said that these vehicles in 1978 had an average load of only 15.4 tonnes when laden, only 71 per cent of the potential full load.

It was unlikely that much more than about a quarter of all loaded vehicle miles by 32.5 tonne vehicles were performed at the maximum full capacity weight.

The company favoured an increase in maximum laden weights to 40 tonnes instead of the 44 tonnes maximum recommended by Armitage and by the European Commission. The 44 tonne proposal has since been rejected by the European Parliament and by the UK Government.

Lorries at 40 tonnes maximum gross laden weight could offer industry cost savings of between 5 per cent and 10 per cent for each capacity tonne-mile compared with current maximum capacity vehicles. Armitage put the savings from the use of 40 tonne maximum capacity lorries at between 7 per cent and 14 per cent.

However, in its evidence to Armitage, the NFC pointed out that "diseconomies arise if heavier vehicles are loaded below 90 per cent of their maximum capacity." It also showed that only small changes are necessary in the operations of existing 32.5 tonne lorries to achieve comparable operating costs with those of 40 tonne vehicles.

Up to 21,000m tonne-kilometres of traffic could be expected to use the extra payload capacity offered by an increase in maximum vehicle weights, according to the evidence NFC sent to Armitage. Over this volume of traffic, the 0.3 pence per capacity tonne mile cost reduction possible with the operation of a 40 tonne maximum gross laden weight lorry would amount to a total cost saving to industry of about £40m a year. This compares with the total of £13.5bn spent on road freight transport in 1979, the latest available Government figure.

Lower transport costs and lower prices for consumer and industrial goods would follow from the introduction of heavier lorries, according to the evidence to Armitage. Operators would also gain through fuel savings, which could amount to 6.6m gallons (25,000 tonnes) of diesel fuel (derv) a year if 40 tonne vehicles were introduced. However, this represents only about 0.4 per cent of the total derv consumption of around 6m tonnes.

The Government is expected to respond in full to the recommendations made by Sir Arthur Armitage in the autumn. However, Mr Norman Fowler, the Transport Secretary, has already made clear his total opposition to 44 tonne maximum gross laden weight lorries on British roads.

Mr Fowler took MPs, especially those on the Opposition benches, completely by surprise in a debate on lorries, people and the environment on June 17, when he accepted an opposition motion against heavier lorries tabled by Mr Albert Booth, the Opposition spokesman on transport.

Refusal

Mr Booth moved "that this House, conscious of the problems caused by existing heavy lorries, is opposed to the Armitage recommendation of 44 tonne lorries." Mr Fowler said: "The Government has decided that the response to Armitage that we shall bring forward in due course will not contain any proposal for a maximum weight as high as 44 tonnes." The Government refused to oppose the opposition motion, which was carried.

Mr Fowler argued that "there are some particular worries about this vehicle (the 44 tonne lorry) and to increase the maximum weight from 32.5 tonnes to 44 tonnes would take us in one jump from having the lowest to having one of the highest gross weights in Europe."

The Government has not made a final decision public about its plans for heavier lorries, but the maximum weight limit is almost certain to rise. Mr Fowler said that "it is clear that the greater part of industrial benefits could be obtained with a smaller top weight than 44 tonnes."

The option most likely to be chosen by Mr Fowler is a new maximum top gross laden weight of 40 tonnes. This would be in line with the recommendation of the European Parliament that 40 tonnes should form the basis for a European agreement to harmonise lorry weights between countries.

However, Mr Fowler is unlikely to get away with introducing even the lower (than 44 tonnes) weight 40 tonne lorry without further vehement protests from the environmental groups, especially if he tries to sweep the higher weights through Parliament without tightening up controls on these and other lorries.

The environmental groups are adamant that the Armitage recommendations must be introduced as a package. Mr Fowler gave a broad hint that he might be prepared to take this line in the debate on the opposition motion opposing 44 tonne lorries, in June.

No new primary legislation is needed for heavier lorries, or new controls. The changes could be made with the use of a "statutory instrument" modifying the construction and use regulations affecting lorries.

ESTIMATED VEHICLE OPERATING COSTS, 1980

Gross Weight (tonnes)	32.5	35	38	40
Payload (tonnes)	21.5	24	26	28
30,000 MILES A YEAR				
Total Annual Operating Costs (£)	25,714	27,239	29,499	31,169
Operating Costs per mile (p)	85.7	90.8	98.3	103.9
Operating Costs per capacity tonne-mile (p)	3.99	3.78	3.78	3.71
60,000 MILES A YEAR				
Total Annual Operating Costs (£)	44,174	45,969	48,804	51,829
Operating Costs per mile (p)	73.6	76.6	81.3	86.4
Operating Costs per capacity tonne-mile (p)	3.42	3.19	3.12	3.09

Source: National Freight Company, evidence to the Armitage Inquiry

LORRIES AND WEIGHTS

Number likely to replace 32.5 tonners if weight limit raised	
34/35 tonnes, 4 axles	7,800
38 tonnes, 5 axles	21,800
40[1]/42[2] tonnes, 5 axles	10,000
44 tonnes, 6 axles	2,600
Total	42,200

[1] 2 axle tractor, 3 axle trailer.
[2] 3 axle tractor, 2 axle trailer.
Transport and Road Research Laboratory estimate the cost of savings such a switch would be about £116m per year, at January 1979 price levels. That is equivalent to about £150m at June 1980 prices.

Source: Armitage Report, December 1980

Shortfall in Government spending angers MPs

ROADS

LYNTON McLAIN

ROADS IN Britain, or the lack of them, are an emotive subject. Some groups, mainly industrialists, hauliers and users of freight services, believe there are powerful arguments for more money to be spent on more and better roads. In particular, many believe a better infrastructure of roads is a vital precurser to the development of a sound economic base.

Other groups, including environmental groups and British Rail, would not necessarily agree that scarce public resources should be spent on roads. They would agree, however, that money needs to be spent on improving the transport infrastructure of Britain, but that the railways are the more deserving cause.

Behind this wide-ranging debate, one that is never still and rarely quiet, lie the bald facts of road building and the Government's plans for the future. Plans for roads in the past, however, have rarely been executed precisely as planned by governments and a current concern is that the Government is seriously underspending the amount of money it allocates to roads.

On paper, Britain has an ambitious programme for building new trunk roads and motorways. These would cost nearly £3.5bn and would involve nearly 400 new schemes if all were built according to the Government white paper, Policy for Roads: England 1980.

These figures represent the total scale and cost of all possible future road schemes in a government "pool" of ideas for roads for the future. The programme was based on a "realistic assessment of future prospects," the Government said in the white paper, its first comprehensive statement of its policies for the trunk road system in England.

Whatever the merits of the conflicting arguments in the road versus rail debate and whatever the merits of the particular schemes suggested for the future in the white paper, the reality of road development in Britain leaves a great deal to be desired. That is the view of MPs on the House of Commons transport committee in a succession of reports highly critical of the policies of successive governments towards road planning and building in Britain.

The transport committee first drew attention to shortcomings with the scale and administration by the Department of Transport of road programmes in their response to last year's government white paper on the expenditure plans up to 1983-84.

The Government plans called for provision of finances to permit the completion of about 500 miles of motorway and trunk roads in England between 1979-80 and 1983-84, the end of the Government's financial planning period. The suggested schemes included the M25 motorway designed to circle London and a number of bypasses.

However, behind these general statements of intent lay a pronounced underspending on new roads. Spending on road and motorway construction in England and Wales was 22 per cent (£95m) below the agreed target expenditure in 1978-79. A shortfall of 10 per cent below planned spending levels was also expected in 1979-80 in line with a pattern of underspending which had become established for some years. The shortfall for 1979-80 turned out to be £25m or 6 per cent lower than the level originally planned. The total shortfall on spending in England alone was £190m (at 1979 survey prices) between 1976 and 1979.

The underspending was attributed by the Department of Transport to the weather, to the re-assessment of traffic volumes after the rise in oil prices, to the moratorium on capital projects introduced in the autumn of 1976 and to the process of public consultation on road schemes, introduced in 1973, which delayed schemes.

'Unsatisfactory'

The MPs recognised the difficulties, but said in their report in the Government White Paper that it was "highly unsatisfactory that the targets for expenditure on the construction of major roads have not been met." The targets ran the risk of not being met in the future.

The MPs wanted the Government to allow the Department of Transport to carry over from one year to the next an agreed "maximum proportion of the motorway and trunk roads construction budget." The aim was to reduce the dangers of a repitition of previous "serious underspending."

Mr Norman Fowler, who was then Minister (now Secretary) of Transport agreed that the suggestion would assist the management of road programmes, but he failed to agree to action to allow a rolling programme for roads. Instead, he suggested that a "reserve list of road schemes which could start at comparatively short notice" should be built up.

The transport committee of the House of Commons had earlier welcomed the Government plan to maintain spending on the construction, improvement and maintenance of motorways and trunk roads, "so long as spending is actually achieved at the level envisaged."

Spending, once again, was not at the level planned for the last financial year, 1980-81. The total expenditure on trunk roads and motorways was projected by the Government in March 1980 to be 5 per cent higher than in the previous year. In practice, although spending was close to the cash limit, the outturn for construction in volume terms was about 9 per cent below the previous year and 14 per cent below the planned level.

Spending on maintenance was about 6 per cent below the planned level.

The MPs were highly critical of the accuracy of the Government's forecasting of expenditure and of its ability to manage the road programme. The MPs expressed their concern over the "deliberate but unquantified over-programming in the road construction and maintenance programme."

Ministers and civil servants had insisted to the MPs on the transport committee that no road schemes were suffering through lack of money. Yet year after year, volume outturn of spending on roads falls below the planned level. Roads that are in the Government's immediate programme, are delayed or do not get built.

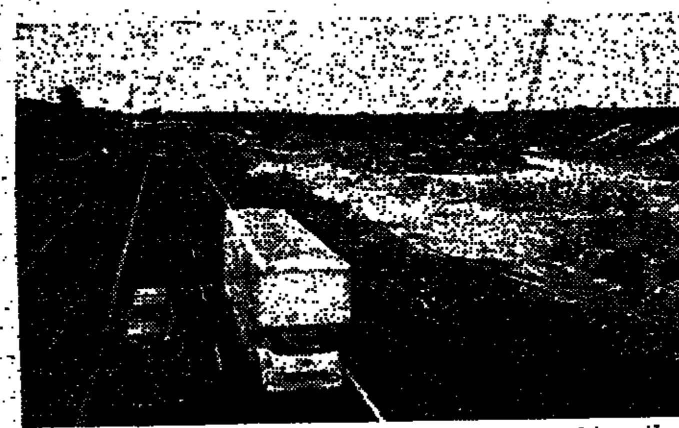
Nevertheless, it was impossible for the transport committee of the House of Commons to decide if these problems were a result of the Government's own expenditure constraints or if the road construction programme "is proving to be wildly inaccurate and unrealistic."

An answer is wanted urgently, by the committee and by those in industry and transport waiting for road schemes that have already been accepted by the Government but which have been delayed through underspending. The effect of the under-spending is that the Government's own strategy for roads, based on three major priorities, is itself now at risk.

The Government, in its white paper Policy for Roads; England 1980, spelt out that its roads programme was to be based on

- Roads which aid economic recovery and development
- Roads which bring environmental benefit
- Maintenance to preserve the investment in roads already made.

In its latest response to Government spending plans, the fifth report from the transport committee, on the transport aspects of the 1981 public expenditure white paper, the MPs urge immediate action by the Government to take decisions on "vital and socially desirable capital expenditure programmes in transport." The alternative is for Britain to continue "indefinitely" with an inadequate road and public transport system," the MPs said.



John Laing Construction has started to widen the M1 in Hertfordshire from two lanes each way to three. The work will take two years

BUILDING AND CIVIL ENGINEERING

Standing the test of time

BY DEBORAH PICKERING

HOUSE-BUYERS and particularly buyers of new houses—have the right to know whether they are getting value for their money, and an appreciating investment, when they make what for most of them is the most important financial decision of their lives.

That is the message of a new campaign launched by the House-Building Advisory Bureau which is greatly perturbed by the increasing trend towards the construction of timber-framed houses in the UK, which the Bureau intends to combat with a solid argument for traditional building methods.

First-time buyers have a clear list of priorities when perusing estate agents' lists — ranging from a specified number of rooms, the existence or size of a garden, location and relevant distance from trains, buses and shopping facilities. But does the prospective house buyer *know—or care—what goes* into the construction of a residential property?

According to the House-Building Advisory Bureau the basic form of construction used in a house is not usually questioned by the buyer, the estate agent, building society manager or solicitor involved in the transaction.

Telling the public

The Bureau has been set up to tell the public what it can buy for its money and aims to particularly impress on the small house builder his responsibility to new customers.

It says that the traditional method is one involving walls of brickwork and blockwork and that only masonry materials of reliable and durable construction can constitute a "real" home.

Not only will this last for decades, but such a *traditional* method of building highlights a house's investment potential and should prove a valuable factor on the resale market. That is, of course, if the next buyer wants to know or bother to evaluate what lies behind the house's façade.

Growing trend

The Bureau is making an all-out attack on the increasing production and erection of timber-framed houses which are now rapidly appearing all over the UK. In the private housebuilding sector, 2.9 per cent of dwellings built during 1975 were of timber-frame construction, but by the second part of this year this has risen to 15 per cent.

Two bones of contention picked on by the Bureau are the use of the word traditional by the timber-frame vendors, and the fact that small builders are seduced by the blandishments of speedy erection. Basic frames are prefabricated in factories and delivered in sub-sections to site for immediate placing on prepared foundations.

The builder does not have to despair over vagaries of the English weather or worry over the drying-out problems when hundreds of gallons of water used in conventional construction need to *evaporate—mostly* inside the dwelling.

He can save weeks of lost time, and gain benefits of cash flow in the meantime. But, says the Bureau, the latter is not being passed on to the consumer.

Description of "traditional" for timber-framed homes, says the Bureau, evokes 400-year-old examples of Elizabethan houses which still delight the onlooker today, but Tudor talents incorporated good old English oak of considerable dimensions (*veritable tree trunks*) *whereas* timber-frame today is really softwood.

Both forms of construction meet the necessary building regulations, are accepted by the NHBC, building societies and banks, and so far are regarded as equal fire risks, admits Herbert Cruickshank, the Bureau's chairman.

Cruickshank is 69, an ex-Bovis-boy (joining the company as a trainee in 1931 and subsequently moving to the board of Bovis Holdings). The eminence grise (or wise old owl used as the H-BAB's motif), Cruickshank passionately believes in the customer's right-to-know. He says:

"I think that dangers inherent in the recent timber-frame campaign arise from *over* promotion," and he wonders if builders realise that this construction is an engineered form of building and that they will encounter different forms of material perhaps for the first *time. After all, he argues, what* sort of track record is available?

"I think the timber frame industry itself fears the cowboys —as, of course, should the consumer!"

The Campaign for Traditional *Housing aims to encourage* house buyers to insist on information about the basic form of construction of his potential home because one in seven new houses now uses softwood frames and plasterboard (a method imported from North America and Scandinavia).

Behind the facade

When the structure is clad in brick, says Cruickshank, it is virtually impossible to tell the difference between the timber-frame method and solid, traditional construction. The customer should know because, Cruickshank feels, his choice of home should reflect on his future plans for expanding the property or putting it back on the market in the five to seven years that is usual with first-time owners.

Sponsoring the campaign are the Aggregate Concrete Block Autoclaved Aerated Concrete Products Brick Development and Cement and Concrete Associations.

Free literature is available from the H-BAB at 353 Strand, London, WC2 (01-836 5263).

Replacing an 80 tonne damaged fender unit at BP's Hound Point oil terminal in the Firth of Forth, site of the main terminal for the Forties Field. The job called for a 60 x 19 metre pontoon on which a Manitowac 4100 heavy lift crane with a 28 metre jib had to be mounted to remove and re-position the fender. Although a deadline of 96 hours had been specified, Edmund Nuttall's Scottish office finished the work 12 hours ahead of schedule.

New contracts for both McAlpine groups

MAJOR WORK in a number of contracts, together worth more than £6¼m for Sir Alfred McAlpine companies is its northern division's four-storey office block fronting on to Alfred Gelder Street and Guildhamm Road, Hull. This is for the McAlpine Landware Property Partnership under a deal initially worth around £2m.

Northern division is also carrying out an extension and alterations to the existing Five Fords sewage treatment works for the Welsh Water Authority at a start-off price of about £1m.

Between Water Tower and Canning Streets, Chester, it is to *build a terrace of eight, three-*storey traditional construction houses for Northgate Developments (£330,000).

Civil works for a cooling tower at Windscale for British Nuclear Fuels is worth another £¼m, and Wales Gas has awarded a more than £½m contract to McAlpine Services and Pipelines for a steel pipeline involved in larger pipeline schemes at *Llanerchymedd and* Holyhead.

This latter company has just completed the major portion of a contract (initially valued at £2¼m) for the Yorkshire Water Authority which provides a new sewage disposal system to the sea from the holiday resort Bridlington.

The company has constructed and connected to existing land sewers and a pumphouse a 1.7 km long, one metre diameter steel pipeline into Bridlington Bay. This was entrenched into the seabed with the necessary dredging being carried out by the Sir Alfred McAlpine Zanen Dredging Co.

Unusual aspect of the scheme was that no convenient dry land existed for construction of the pipeline prior to the launching, and MSP had first to build a working platform on the beach, above high tide level, to accommodate 2,000 tons of pipework forming the pipeline. This con*sists of a 12.7 mm thick steel* pipe of one metre nominal bore made to an API XX 5LS specification, protected internally by a cement mortar lining and externally by a bitumen fibreglass wrapping around which is a 110 mm concrete sheathing fabricated from vibrated steel shutters.

Seaward end of the pipeline, which tapers down to 500 mm diameter and is anchored into its trench by a 30 ton concrete block, carries 80 diffuser ports spread out over 200 metres to achieve sewerage dilution into the North Sea.

Newcastle factory

SIR ROBERT McALPINE and Sons has a £6m contract from Vickers Defence Systems for the construction of a heavy engineering factory in Newcastle upon Tyne to be built on an 8 hectares site at the west end of Scotswood Road alongside the River Tyne.

Called Operation Dreadnought, the building will be within 33,000 square metres of space-heated covered floor area and measure 549 metres by 61 metres.

Vickers will carry out fabrication, machining, assembly and testing of fighting vehicles, with *specialised cranage facilities* to handle a wider range of heavy engineering products.

The scheme requires excavation amounting to 5,000 cubic metres before the pouring of 26,000 cubic metres of concrete reinforced with 27,000 square metres of fabricated steel.

McAlpine Design group is the design engineer working in concert with the project management team of architects and engineers Ryder and Yates and Partners and quantity surveyors RNJ Partnership.

Work is due to start immediately with completion scheduled for July next year.

Bovis work for Renault

AN £8m parts distribution centre for Renault UK will be built on a 16-acre site at Westlea Down Industrial Park, near Swindon, with Bovis Construction acting as management contractor.

The project has been designed by Foster Associates and will consist of 20,000 square metres of warehouse accommodation, and 4,000 square metres comprising offices for the managing of the distribution centre, a showroom for cars and vans, with a regional office, an after sales training school and restaurant facilities.

All the building's activities will be contained within one overall structure made up of a set of 24 metre by 24 metre modules. The column grid of *24 metres firstly relates to the* various types of racking used in the warehouse, providing a high degree of flexibility in its layout.

This also serves as an overall planning grid, allowing the building to make maximum use of the irregular shape of the site.

The 19,500 square metres of warehouse space in the building will have an average height of 9 metres and will include a full height enclosure for two levels of central plant, and a fire resisting enclosure for storing inflammable goods.

Loading area will have 14 doors with dock levellers — six for reception and eight for dispatch — and two level entry points to provide access for light commercial vehicles. Adjacent to the reception area on a mezzanine level is a storage area for valuable goods and the reception office.

In addition to the warehouse, five modules will provide the enclosure for the offices, showroom, training school and restaurant, and a further module effects a canopy for the building's main entrance.

The building will be of 205 mm reinforced concrete ground bearing slab with a 20 mm monolithic topping of granolithic paving with a hardened surface on 300 mm sand blinded sub-base, heavy gauge polythene damp proof membrane and reinforced concrete perimeter ground beam.

Private houses

THREE NEW large private residential redevelopments, worth *more than* £8.5m, are to be built in the central area of Scotland by Leech Homes (Scotland), the Falkirk-based member company of the William Leech housebuilding group.

One scheme is the largest single project in the company's history and covers the *£5.5m* development at Renfrew of more than 200 new homes of six different types.

The second project is at Bishopsbridge and will provide more than 50 new homes in the £26,000 to £40,000 price range at Villafeld, *said to be one of* Glasgow's most attractive suburban areas. Work here involves demolition of a former printing works.

About 50 new homes will be constructed on the company's recently acquired 5-acre site at Cambus, near Alloa, adjacent to an existing attractive housing development by Leech.

Breakwater repairs

BUILT ABOUT a century ago, Newhaven breakwater is a mass concrete construction whose foundations have been undermined over the years by sea action.

British Railways Board now envisages that about 6,000 cubic metres of underwater concrete needs to be placed to repair the scoured cavities of the breakwater foundations.

Contract for these repairs has gone to Taylor Woodrow, and the £2m scheme has already started with completion due in about two years.

Tarmac takes £5m

WORK WON by companies in Tarmac Construction is worth nearly £5m, the largest award being a £1.5m single-storey workshop and offices scheme at RAF Sealand, Deeside, for Cubitts.

Three other jobs for Cubitts include three two-storey barrack blocks at RAF Hullavington (£557,000), painting *and repairs* to 250 council houses at Kirkby for Knowsley Metropolitan Council, Merseyside (£196,000), and refurbishing Barclays Bank in Tottenham Court Road, London (£135,000).

Tarmac Regional Construction has received a £1m award for building a production plant and offices at Hillhead Quarry, Buxton for Forticrete; warehouse units and associated works at Eastleigh for Citygrove European Holdings (£394,000); site levelling, access road and sewers at Consett for English Industrial Estates (£322,000); and 24 council homes in Scarborough Road, Sheffield, for Sheffield Metropolitan Council (£314,600).

Refurb (the company's refurbishment company) has two contracts. Fitting out Burlington House for British Telecom at Coventry is worth £278,060, and refurbishing offices at BL Canley is worth another £118,000.

New factories in Corby

THE Commission for the New Towns (the Government agency which took over from the previous Development Corporation in 1980) announces the letting of £3½m's worth in its continuing factory construction programme in Corby, Northants.

Now undergoing construction by four different national constructors are 25 factories, ranging in size from 3,600 up to 100,000 square feet.

Largest scheme is being handled by Norwest Holst (which has just handed over the new Oxford University Press warehouse complex). This company has been appointed to design and build the major unit for £1.3m.

Shank and McEwan's Corby office has started work on a pair of 20,000 sq ft and six 10,000 sq ft speculative factories with a total value of £1.2m.

Contract for £705,956 has gone to Higgs and Hill which is building 13 small speculative factories providing 66,000 sq ft in two blocks.

Wilcon Construction has nearly completed 19 small units and now has a further £425,252 for three 10,000 sq ft units.

All these jobs are on the Earlstrees Industrial Estate's extension area which is also one of Corby's three new enterprise zones.

WORLD STOCK MARKETS

NEW YORK

[illegible]

Dow easing at midsession

AFTER A strong start, stocks were losing ground at mid-session, as concern about the long-term prospects for the U.S. economy overshadowed the cut in prime lending rate by two big banks.

The Dow Jones Industrial Average was off 0.10 at 892.12 at 1 pm, after gaining nearly 6 points in the first half-hour of trading. Advances led declines by nine to five on volume of 25m shares (27m). The NYSE All Common Index was up 16 cents at $72.13.

Analysts said investors were disappointed that the cut, to 20 per cent from 20½ per cent, led by Chase Manhattan, was not bigger and they are still not convinced that interest rates overall will fall substantially.

Federal Reserve chairman Paul Volcker's statement at the weekend that the Fed plans to continue its restrictive monetary policy bolstered the market's belief that interest rates may remain at high levels for some time, Mr Monte Gordon of Dreyfus Corporation said.

Few issues showed big price changes either up or down. A notable exception was General Portland Cement, off $3½ at $34⅞. The company won a court order restraining Canada Cement Lafarge from acquiring any of its shares.

Also lower was Del E. Webb, off $1 at $8½, after a bearish report on the company was published.

Superior Oil was the most active issue, up ½ at $37. Also active was Cities Service, off $1⅛ at $53⅛.

Several big blocks of utility stocks were traded, including 100,000 shares of Pacific Power and Light at $18⅞, off ⅛, and 92,900 of Commonwealth Edison at $21, up ¼.

In the Technology sector, Honeywell shed $1½ to $86½, Sperry ¼ to $35½, Xerox ¼ to $47½ and Data General ½ to $46.

THE AMERICAN Market Value Index rose 2.47 to 357.27 on volume of 3m shares (2.9m).

Canada

Toronto stock prices moved upward at mid-session led by the Oil and Gas issues, with the Composite index gaining 15.5 points to 2,203.7 on volume of 2.6m shares.

Eleven of the 14 indices advanced, led by Oil and Gas up 88.9 at 4,945.3. The declines were paced by Real Estate and Construction, off 59.3 at 7,025.0.

Montreal stocks were mostly higher, with the Composite Index rising 3.18 to 355.08. Oils were again prominent.

Germany

Prices extended opening gains during a moderately active session and closed higher across the board, with the Commerzbank Index rising 6.80 to 721.10.

The firmer tone was attributed to buying by domestic institutional investors and to professional operators building up their share portfolios again after reducing them recently.

In Motors, Daimler rose DM 4.50 from Friday's close to DM 348, BMW DM 2.70 to DM 190. VW shed DM 0.30 at DM 148.50.

In Chemicals, BASF added DM 3 at DM 148.90, Bayer DM 2 at DM 131.40. Hoechst DM 0.70 at DM 126.50 and Schering DM 2 at DM 304.

On the domestic Bond market, public authority loans rose, and the Bundesbank sold DM 15m of paper after DM 10.1m on Friday. The rise was attributed to easier U.S. interest rates, the weaker dollar, Friday's higher U.S. bond market close and demand for paper as operators reinvested interest payable today on some outstanding bonds.

Amsterdam

Share prices were mixed, with Royal Dutch and Hoogovens up Fl 0.60 and Fl 0.30 at Fl 89.1 and Fl 17 and Unilever unchanged at Fl 156.5 in Dutch Internationals.

Shipper Ned Lloyd was down Fl 1.70 at Fl 152.3 while AMRO added Fl 1 at Fl 55 in mixed Banks, Robeco lost Fl 1.50 and Rorento Fl 0.80 in Investment Funds, while in lower Mortgage Banks WUH lost Fl 3 and FGH Fl 0.80. Ennia was steady at Fl 126.5 in generally higher Insurances.

Australia

News of a sharp fall in U.S. M1-B money supply and renewed demand for stocks involved in the Ashton joint venture diamond project allowed the market to close the month on a firmer note.

Expectations that an Ashton venture partner, CRA, will report a sharp decline in interim profit today were cast aside as the shares rose 13 cents to A$3.95.

Ashton Mining rose 14 cents to A$1.66 after the release of its quarterly report, in spite of its announcement that mining of alluvial deposits at the Upper Smoke Creek deposit will not start until next year.

Golds were dominant after the U.S. money supply news. Central Norseman led the way, rising 60 cents to A$7.80, while Poseidon added 55 cents at A$4.40 and GMK 50 cents at A$7.50.

Elsewhere, MIM gained 12 cents at A$4.10, WMC 13 cents at A$4.85, Bougainville 5 cents at A$1.60, North BH 10 cents at A$2.90, Woodside 5 cents at A$1.60, BHP 15 cents at A$12.60, CSR 12 cents at A$5.14, and ANZ Bank 6 cents at A$5.34. Bank NSW was steady at A$3.05.

The All Ordinaries index finished the day 6.1 points higher at 629.6.

Singapore

Share prices closed sharply lower on heavy selling pressure across the board in continuation of last week's steep decline.

Among Industrials and Finances, Central Sugars, Genting, Haw Par, Magnum, National Iron, Perlis Plantations, Sime Darby, Straits Trading, Development Bank, Hong Leong Finance, Oversea Chinese Bank and Malayan Bank fell between 14 cents and S$1.30.

The Straits Times index fell 34.72 points to 623.10.

Hong Kong

The market was closed yesterday.

Tokyo

Prices closed higher in moderate trading on selective buying in Steels, Robot and Energy-related issues and Shipbuildings.

The Nikkei Dow market average rose 17.53 to close at 7,815.78, on volume of 260m shares. The Tokyo Stock Exchange Index closed at 589.44, up 1.04.

High-priced Electricals firmed on what the market considered cheap buying, but Cameras and Vehicles weakened. Sony rose Y20 to Y4,580 and TDK Electronics Y40 to Y4,550 while Canon fell Y30 to Y1,570, Toyota Motor Y10 to Y1,360 and Nissan Motor Y10 to Y1,120.

Kawasaki Heavy Industries rose Y12 to Y288 on good demand for industrial robots. Nippon Steel rose Y3 to Y229, Kawasaki Steel Y4 to Y234 and Nippon Kokan Y3 to Y236 on buying by institutional investors.

Other gainers included Nippon Oil, up Y25 to Y891, Mitsui Company Y13 higher at Y332, Kaken Chemical Y90 up at Y2,090, and Mitsubishi Corporation Y12 up at Y654.

Johannesburg

Gold shares closed firmer in line with the stronger bullion price, but trading was quiet and confined to local interest because of the bank holiday closure in the UK.

Heavyweights rose up to R2.50, as in St. Helena at R46.50, while cheaper-priced producers added between 10 and 50 cents generally. Mining Financials had Anglos up 25 cents at R16.75, while in Diamonds, De Beers added 8 cents at R8.85.

Closing North American prices were not available for this edition.

CANADA

Stock	Aug. 28	Aug 27
AMCC Intl	21¾	21¾
Abitibi	22½	23¼
Agnico Eagle	11	10½
Alcan Alumin	30⅞	31
Algoma Steel	45½	45
Asbestos	40	40
[illegible]		

BELGIUM (continued)

Aug. 31	Price Frs.	+ or −
Petrofina	4,145	−5
Royale Belge	3,930	
Soc Gen Banq.	1,655	+10
Soc Gen Belge	904	
Sofina	2,505	+25
Solvay	2,070	+30
[illegible]		

HOLLAND

Aug. 31	Price Fls.	+ or −
ACF Holding	85	−1
Ahold	70.1	−0.1
AKZO	24.2	+0.1
ABN	296	+1
AMEV	92.3	+0.4
AMRO	55	+1
[illegible]		

AUSTRALIA

Aug. 31	Price Aust. $	+ or −
ANZ Group	5.34	+0.06
Acrow Aust	1.20	
Allstate Expl	1.04	+0.09
Ampol Pet	1.50	−0.01
Assoc. Pulp Pap	2.20	
Audimco	0.16	
Aust. Cons. Ind.	1.90	+0.02
[illegible]		

JAPAN (continued)

Aug. 31	Price Yen	+ or −
Kubota	350	
Kumgaai	338	−2
Kyoto Ceramic	3,550	−30
Lion	393	+5
Maeda Cons	515	+4
Makita	930	−10
Marubeni	329	+4
[illegible]		

DENMARK · FRANCE · GERMANY · AUSTRIA · BELGIUM/LUXEMBOURG · ITALY · NORWAY · SWEDEN · SWITZERLAND · HONG KONG · SINGAPORE · SOUTH AFRICA · BRAZIL

[illegible]

Financial Rand US$0.82½ (Discount of 22%)

Indices

NEW YORK —DOW JONES

[illegible]

STANDARD AND POORS

[illegible]

N.Y. S.E. ALL COMMON

[illegible]

MONTREAL

[illegible]

TORONTO Composite

[illegible]

NEW YORK ACTIVE STOCKS

[illegible]

Base values of all indices are 100 except Australia All Ordinary and Metals—500; NYSE All Common—50; Standard and Poors—10; and Toronto—1,000; the last named based on 1975. † Excluding bonds. ‡ 400 Industrials. § 400 Industrials plus 40 Utilities, 40 Financials and 20 Transports. c Closed. u Unavailable.

NOTES—Prices on this page are as quoted on the individual exchanges and are last traded prices. § Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

Growth in cars at Volvo masked by currency loss

BY WILLIAM DULLFORCE, NORDIC EDITOR, IN STOCKHOLM

VOLVO, THE Swedish automobile group, yesterday reported first-half earnings of SKr 619m ($119m) before losses from currency fluctuations against SKr 596m in the first six months of 1980. Group turnover climbed by 13 per cent to SKr 12.5bn, boosted by a 18 per cent advance in car sales to SKr 6.5bn.

Currency losses amounting to SKr 59m during the second quarter, however, cut the first-half pre-tax figure to SKr 563m *compared with SKr 605m in the* first six months of 1980, when currency fluctuations worked in Volvo's favour.

Beijerinvest, the trading and industrial group whose merger with Volvo was finalised earlier this year, reported simultaneously a growth of close to 19 per cent in earnings to SKr 183m in the first half. Turnover reached SKr 10.9bn, ahead by 15.8 per cent.

The strongest profit advance within the Beijerinvest group was made by the parent company, *which holds a stock portfolio* valued at SKr 953m at the end of June, and showed earnings of SKr 90m for the first half against SKr 48m. Of this profit, however, SKr 47m was attributable to sales of shares.

Scandinavian Trading Company, Beijerinvest's oil trading subsidiary, was responsible for SKr 7.5bn of group sales but its contribution to group earnings fell from SKr 95m during the first half of 1980 to SKr 56m. The decline was largely caused by increased interest charges arising from the company's exploration investments.

A recovery in car sales was the major contribution to Volvo's earnings growth during the first half. The group delivered 145,000 cars during the period, an advance of some 10,000 over the first six months of 1980.

The figure includes deliveries of the smaller 343 models made in the Netherlands, although Volvo has reduced its stake in the Dutch operation to 30 per cent. First half sales reported do not include sales by the Dutch factory.

Drop in metals prices hits MIM

By George Marshall in Sydney

EARNINGS OF MIM, the Australian base metal producer controlled by Asarco of the U.S. were almost halved in the year to June 30 from A$203.56m to A$106.43m (U.S.$122m).

The profit slide has resulted in a cut in the total dividend payment from A$123.3m to A$67m, or from 30 cents to 15 cents a share.

Turnover dropped from A$846.7m to A$721.42m because of lower metal prices. Pre-tax profit fell from A$381.05m to A$200.95m. The group's tax bill was down from A$177.48m to A$94.51m.

A return to full capacity at MIM's Townsville refinery after an extensive modernisation helped lift copper sales volumes by almost 8 per cent from 160,482 tonnes to 172,992 tonnes, although part of this increase was also made up of additional sales of unrefined copper products.

However, the average price of copper during the year plunged from A$1,953 a tonne to just under A$1,680 a tonne. Sales volumes for zinc, lead and silver were in line with those of the previous year at 84,978 tonnes, 147,255 tonnes and 438,039 kilogrammes respectively.

However, there was an almost doubling of nickel sales from 2,169 tonnes to 4,258 tonnes and coal sale sjumped from 625,315 tonnes to slightly more than 1m tonnes.

The greater volume of nickel sales was accounted for by a lift in MIM's share of sales from Agnew project while in coal sales reflected increased exports of steaming coal from its Collinsville mine.

Directors said industrial stoppages leading to the settlement of two industrial agreements earlier in the year and environmental and other delays had caused generally lower production levels at its Mt. Isa mines. They also said demand for iron-ore and coking coal was slow because of the depressed world steel industry.

PENDING DIVIDENDS

Company	Date	Announcement last year
APV	Sept 25	Int. 2.8
Adwest	Sept 29	Final 5.33
Anglo Amer. Inv. Tst.	Oct 2	Int. 250 cents
Armstrong Equipment	Sept 25	Final 1.72
*BICC	Sept 9	Int. 3.33
BSR	Sept 10	Int. nil
BTR	Sept 8	Int. 5.25
*Babcock Intl.	Sept 2	Int. 3.4
*Bank of Scotland	Sept 22	Int. 8.0
*Barratt Devs.	Sept 22	Final 8.85
Berkeley Hambro	Sept 25	Int. 3
*Bilton (Percy)	Oct 1	Int. 2.5
*Blackwood Hodge	Sept 10	Int. 1
Booker McConnell	Sept 18	Int 1.25
*Bowater	Sept 9	Int. 4.25
*Brit. Elec. Traction	Sept 3	Final 5.709
*British Petroleum	Sept 3	Int. 6.25
*British Vita	Sept 1	Int. 2.6
Brixton Estate	Sept 25	Int. 1.46
Burmah Oil	Sept 17	Int 1.5
*Cadbury Schweppes	Sept 3	Int. 1.2
*Cement Roadstone	Sept 2	Int. 2.1
*Charterhse.	Sept 3	Int. 1.75
Cons. Gold Fields	Sept 17	Final 15.0
*Costain	Sept 8	Int. 4.0
Currys	Sept 29	Int. 1.5
Dalgety	Sept 17	Final 11.0
DRG	Sept 22	Int. 3
Dunlop	Sept 25	Int. 2.65
Eagle Star	Sept 17	Int. 5.0
European Ferries	Sept 19	Int. 1.725
*Fisons	Sept 21	Int. 6.9
Grattan Warehouses	Sept 24	Int. 1.866
*Guardian Royal Exch	Sept 2	Int. 6.0
GKN	Sept 18	Int. 4.0
Harrisons Malay Ests	Sept 10	Final 5.5
*Hepworth Ceramic	Sept 10	Int. 2.25
*House of Fraser	Sept 9	Int. 2.0
**Howden (A.)*	Sept 24	Int. 3.5
*IMI	Sept 8	Int. 2.0
Kleinwort Benson	Sept 23	Int. 2
Laporte Inds.	Sept 19	Int. 3.5
*Lead Inds.	Sept 10	Int. 3.7
Legal and General	Sept 17	Int. 3.0
London Merch. Secs	Sept 15	Final 0.6
*Marchwiel	Sept 2	Int. 2.4
Mills and Allen Int.	Sept 24	Final 11
Morgan Crucible	Sept 4	Int. 4.5
NEI	Sept 4	Int. 1.25
Nurdin and Peacock	Sept 10	Int. 1.675
Pearson Longman	Sept 9	Int 3.75
Pearson (S.)	Sept 9	Int. 3.75
P & O	Sept 10	Int. 3.0
*Phoenix Assce	Sept 2	Int. 6.5
*Prudential Corpn.	Sept 10	Int. 4.0
Rnsm. Sims & Jefferies	Sept 22	Int. 3.14
Ready Mixed Concrete	Sept 30	Final 3.7
*Reckitt and Colman	Sept 8	Int. 3.5
Reed (Austin)	Oct 2	Int. 0.9
RTZ	Sept 17	Int. 5.5
Rowntree Mackintosh	Sept 18	Int. 2.5
Scot. Mtropltn. Prop.	Oct 3	Final 2.0
Simon Engng.	Sept 15	Int. 4.0
Stand. Chartd. Bank	Sept 9	Int. 12.0
*Steetley	Sept 17	Int. 4
*Sun Alliance	Sept 2	Int. 15.0
*Tarmac	Sept 21	Int. 5.5
Tilling (T.)	Sept 10	Int. 3.5
Travis and Arnold	Sept 15	Int. 0.84
Tricentrol	Sept 17	Int. 2.8
*Turner and Newall	Sept 10	Int. 3.0
UDS	Sept 16	Int. 2.8
Utd. Biscuits	Sept 11	Int. 1.87
Vickers	Sept 25	Int. 4.55
*Weir Group	Sept 2	Int. 1.853
*Willis Faber	Sept 15	Int. 3.8
*Wimpey (G.)	Sept 24	Int. 0.85
Yorkshire Chems.	Aug 28	Int. nil

* Board meeting intimated. † Rights issue since made. ‡ Tax free. § Scrip issue since made. ¶ Forecast.

RECENT ISSUES

EQUITIES

Issue price p	Amount paid up	Latest Renunc. date	1981 High	1981 Low	Stock	Closing price p	+ or −	Div. p. or amount	Times covered	Gross yield	P/E ratio
153	F.P.	21/8	172	152	✠Aerospace Eng.	165	+11	bd7.5	1.4	6.5	15.3
64	F.P.	3/9	63	60½	East of Scot. Onshore	62	+1	g0.83	—	1.9	—
§52	F.P.	24/9	92	75	✠Fleet St. Letter. 5p	92	+6	b2.5	1.9	3.9	18.3
—	F.P.	14/8	7	6	✠Hartons 5p	7	—	—	—	—	—
25	F.P.	18/9	38	27	Japan Assets Trust 10p	27	—	—	—	—	—
§130	F.P.	1/10	134	132	✠Markheath 54.6% Pfd	134	—	—	—	14.6	—
—	F.P.	20/8	125	115	✠*Newcourt Oil*	115	—	—	—	—	—
100	F.P.	—	103	98	✠Ramus	100	—	gd5.0	2.1	7.1	7.7
—	F.P.	18/9	14	10	Stewart Ent. Warrs.	12	—	—	—	—	—
§2	F.P.	28/8	120	114	St'ckhold'rs F.E. Inv $1	116	+1	—	—	—	—
66	F.P.	7/9	86	75	✠Thorpac	92	+2	b1.82	3.7	2.8	12.9
100	F.P.	15/7	104	95	Utd. Comp. & Tech. 50p	99	—	—	—	—	—
§15	F.P.	—	17½	16	✠Willaire Systems 10p	17½	—	—	—	—	—
**	F.P.	—	16	14½	Do. Rest. Div. 10p	15xr	—	—	—	—	—

FIXED INTEREST STOCKS

Issue price £	Amount paid up	Latest Renunc. date	1981 High	1981 Low	Stock	Closing price £	+ or −
—	F.P.	6/7	110	102	Aitken Hume 10% Cnv. Uns. Ln. 1990-91	107	—
100	£40	20/10	38¾	36¼	Birmingham Drop-Lock '86/93	38¾	+½
100‖	F.P.	7/8	112¼	97½	Chloride 7½% Conv. Prf.	99	−1
¶	F.P.	24/9	100½	99⅝	East Surrey Water 10% Prf. 1986	100½	—
100‖	F.P.	28/8	110	104	Hanson Trust 9½% Cv. Uns. Ln. 2000-6	116	+2½
98½	£25	12/11	25¾	24½	Inco 15⅜% Uns Ln. 2006	25	—
100‖	F.P.	12/8	124½	110½	Jones (Edward) 15% Cnv. Uns. Ln. '96-98	118	+2
¶97	*£10*	*3/9*	*110*	*95*	*Mid-Kent Water 9% Red. Prf. 1987*	96	—
‖	F.P.	17/7	104¼	95	Mount Charlotte 9½% Cnv. Ln. 1995-2000	96	—
100	F.P.	—	100⅛	99¾	Nat'wide Bdg Society 14⅞% Bds. 1/2/82	100$\frac{1}{16}$	—
§100	F.P.	—	100⅛	100$\frac{1}{16}$	Do. 14⅞% Bds (25/8/82)	100$\frac{1}{16}$	—
100‖	F.P.	23/7	179	101	Prop. Hldg. & Inv. Tst. 8½% Cnv. Ln.	104	—
**	F.P.	21/9	95p	82½p	Sterling Credit 3.5% Cnv. Red. Pref.	82p	—
100p‖	F.P.	11/8	100½p	77½p	'W' Ribbons 10% Cum. Red. Prf. '95-96	77½p	—
¶100	F.P.	24/9	101	100½	York Waterworks 10% Red. Pref. '85	101	—

"RIGHTS" OFFERS

Issue price p	Am'unt paid up	Latest Renunc. date ●	Latest Renunc. date ■	1981 High	1981 Low	Stock	Closing price p	+ or −
22	F.P.	31/7	11/9	24	22½	A.I.D.	23½	—
275	125p	15/7	2/12	182	130	BP	154	—
42	F.P.	20/8	17/9	52	50	Buckley's Brewery	53	+1
808	Nil	—	—	2pm	1pm	Drayton Far East'n (Units)	2pm	—
18	F.P.	14/8	4/9	21½	19	Edinburgh Gen. Ins.	20	—
176	F.P.	7/8	11/9	255	200½	Extel	253	+3
240	F.P.	—	—	405	210	††Gaelic Oil	210	—
11	F.P.	28/8	30/9	13	10¾	Gartons	10¾	—
62	Nil	—	—	11pm	7pm	H.A.T. Group	10½pm	—
HK$12	HK$6	28/8	9/10	108	66	Hong Kong & Shanghai Bk.	96	−1
12½	Nil	—	—	13pm	11pm	Jantar	13pm	—
131	F.P.	28/8	25/9	172	156	Ladbroke	172	+4
110	Nil	7/9	19/10	25½pm	16pm	Laird Grp.	25pm	+3½
35	F.P.	21/8	2/10	46	41	Lane (Percy)	46	—
77	F.P.	20/8	25/9	92	81	Moss Engineering	90	+2
160	F.P.	9/7	12/8	202	185	New Court Nat. Res. Units	202	+1
A$1	Nil	—	—	148pm	114pm	Pancontinental	114pm	−8
360p	Nil	9/9	9/10	190pm	140pm	Utd. Scientific	155pm	+5
15	Nil	—	—	2½pm	1pm	✠Willaire Systems	2½pm	—

Renunciation date usually last day for dealing free of stamp duty. *b* Figures based on prospectus estimate. *g* Assumed dividend and yield. *u* Forecast *dividend: cover based on previous year's earnings.* F Dividend and yield based on prospectus or other official estimate for 1981. Q Gross. T Figures assumed. ‡ Cover allows for conversion of shares not now ranking for dividend or ranking only for restricted dividends. § Placing price. *p* Pence unless otherwise indicated. ¶ Issued by tender. ‖ Offered to holders of ordinary shares as a "rights." ** Issued by way of capitalisation. §§ Reintroduced. ¶¶ Issued in connection with reorganisation, merger or takeover. ‖‖ Introduction. □ Issued to former preference holders. ■ Allotment letters (or fully-paid). ● Provisional or partly-paid allotment letters. ★ With warrants. †† Dealings under special Rule. ✠ Unlisted Securities Market. ‡‡ London Listing. ‡ Effective issue price after scrip. † Comprising 8 Ordinary and 3 Warrants.

Sharp rise for Novo Industri

BY OUR FINANCIAL STAFF

NOVO INDUSTRI, the Danish pharmaceuticals and enzyme group which raise $65m through the issue of shares on Wall Street in July, almost doubled its earnings in the first six months of the current year.

At the pre-tax levels profits were up from DKr 99m last time to DKr 191m ($24.6m), while at the net level the advance was from DKr 71m to DKr 140m. Sales for the period were nearly 50 per cent higher at DKr 1.07bn ($137m) against DKr 716m, with 97 per cent derived abroad compared with 96 per cent in 1980.

Novo said there was significant progress with sales for both product divisions, with pharmaceutical bulk products, mainly insulin, more than doubled because of higher volume and prices, reflecting its switch to sales of insulin in a more processed form.

Demand for enzymes was strong in all quarters, but particularly so in the starch conversion, alcohol conversion and dairy industries.

The company *said it also* benefited from the weakness of the Danish currency against the main invoicing currencies, the dollar and the yen.

During the first half cash flow was up from DKr 105m to DKr 174m. Capital spending came to DKr 128m against DKr 75m and is expected to grow further in the second half to an annual total approaching DKr 300m. It has lifted its U.S. production capacity by 50 per cent this year and has boosted capacity at its Danish plants. A laboratory and packaging plant in Japan is almost complete.

Fully diluted earnings per share (both A and B) rose by 88 per cent from DKr 18.79 to DKr 35.38. For all of 1980 net earnings were DKr 239m, or DKr 46.35 a share.

Downturn at Leif Hoegh

By Fay Gjester in Oslo

LEIF HOEGH, one of Norway's leading shipping concerns, has reported a fall in operating income for the first half of 1981, and forecasts that full year results will be lower than 1980 at NKr 500m ($81m) before depreciation and interest costs, compared with NKr 524m.

Hoegh attributes the decline mainly to difficult market conditions in the tanker/bulk trade and the winding up of one of the group's companies, Hoegh Container Line.

Operating income before depreciation and interest costs fell by NKr 45m to NKr 221m. Ordinary depreciation amounted to NKr 187m.

The group operates a fleet of 53 vessels, totalling about 2.8m DWT, including 14 chartered for more than a year.

Bergen Steamship Line (BDS) also announced lower results for the half year with a loss of NKr 2.7m, compared with a profit of NKr 6.4m in the same period of 1980. Losses by Bergen Shipping Partners, and poorer results in the cruise and North Sea passenger trades were responsible for the fall.

Sasol coal-to-oil group boosts profits by 35%

BY JIM JONES IN JOHANNESBURG

SASOL, the South African oil-from-coal producer, increased pre-tax profit by 35 per cent to R281.8m ($298m) in the 12 months to June 27 from the R208.2m achieved in the year to June 28, 1980.

Profits are largely derived from the wholly-owned Sasol 1 plant which has been in operation for 30 years. Sasol 2, which is 50 per cent-owned and was budgeted to cost R2.5bn to bring on stream, produced its first crude oil from coal in March 1980 and showed its first profit last December.

However, until it pays dividends it will not make a contribution to the profits of the quoted company, Sasol. The company does not say when this is expected to occur, but it is believed that dividend payments will start in the current financial year.

Half of Sasol 2 and 50 per cent of the Sasol 3 project, *which is still under construction*, are owned by the State. It is intended that once Sasol 2 and 3 report after tax profits of R100m each, the State's 50 per cent holding in the operations will be acquired by Sasol. The price to be paid will be determined at the time of the acquisitions and will be funded by rights issues

Effectively the price paid by Sasol for the remaining shares in Sasol 2 will be used to help finance the R3.28bn Sasol 3 to completion. Sasol 2 concentrates largely on the manufacture of liquid fuels, petrol, diesel, liquid petroleum gas and kerosene. Sasol 3 is to a large extent a duplication of Sasol 2.

The Sasol holding company is 70 per cent-owned by the public and 30 per cent by the State. Earnings on the 375m Sasol shares on issue came to 44.4 cents in the latest year and a dividend of 20 cents has been declared. In the previous year earnings were 32.4 cents a share *and a dividend of 15.5 cents was* paid.

Tax benefits keep Peko in the black

By Our Sydney Correspondent

FEDERAL GOVERNMENT taxation benefits rescued Peko Wallsend, the Australian-based metals miner, from a dive into the red during the year to June 30.

In the worst result announced this bleak profit season for major Australian mining companies, the Sydney-based group has reported a A$3.9m (US$4.5m) profit compared with A$46.7m in the preceding 12 months. Before the inclusion of an A$11.3m tax benefit, there was a pre-tax loss of A$7.7m against earnings of A$50.11m in 1979-80

Demonstrating the impact that recommissioning costs of the Tennent Creek base metal smelter in the Northern territory had, this result was returned despite a 14.9 per cent increase in turnover from A$488.6m to A$561.5m.

Both Mr George Lean, the chairman, and Mr Warwick Holcroft, the chief executive, said yesterday that drastic action was under way to deal with the company's problems and they expected to be back in the black in the current financial year.

They backed their confidence by declaring a final dividend of 5 cents a share, which, although cutting annual total from 22.5 cents to 15 cents a share, will still require the company to dip into reserves.

Public Works Loan Board rates

Effective August 22

Years	Quota loans repaid by EIP†	Quota loans A‡	Quota loans repaid at maturity§	Non-quota loans A* repaid by EIP†	Non-quota loans A* A‡	Non-quota loans A* repaid at maturity§
Up to 5	14¾	14⅞	14⅞	15¼	15¼	15⅜
Over 5, up to 10	14⅞	15⅛	15¼	15⅜	15⅜	15⅜
Over 10, up to 15	15⅛	15¼	15¼	15⅜	15⅝	15⅝
Over 15, up to 25	15¼	15⅛	15	15⅝	15⅝	15½
Over 25	15⅛	15	15	15⅝	15½	15½

* Non-quota loans B are 1 per cent higher in each case than non-quota loans A. † Equal instalments of principal. ‡ Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.

LOCAL AUTHORITY BOND TABLE

Authority (*telephone number in parentheses*)	Annual gross interest	Interest payable	Minimum sum	*Life* of bond
	%		£	Year
Knowsley (051-548 6555)	13½	½-year	1,000	1-3

Boral advances and lifts payout

BY OUR SYDNEY CORRESPONDENT

BORAL, THE diversified Australian building materials group, is paying a higher final dividend after a 37.6 per cent earnings jump to A$48.3m (U.S.$55.4m) in the year to June 30.

The profit was struck on 29.5 per cent turnover improvement from A$469.7m to A$608m, which directors said was generated by greater activity in the construction industry in New South Wales and Queensland and the benefits of recent expansion and diversification.

The board has recommended a final dividend up from 6.25 cents to 7.5 cents, which takes the total payout for the year to 13.75 cents compared with 12.5 cents.

The company's major domestic acquisition in the year was a 78 per cent stake in Quarry Industries while internationally it established itself in the U.S. brick market through two takeovers.

Boral also reached several *farm-in* agreements with Exxon in the Galilee basin of Queensland in its first direct investment in resources.

The series of purchases pushed up borrowings from A$7.4m to A$14.1m.

Tax on the higher profits increased by only 14.8 per cent to A$31.6m because of previous tax losses in the new U.S. subsidiaries, tax benefits in the U.S. and investment allowances.

The building industry continues to be the mainstay of Boral's operations and despite the downturn in home construction towards the end of the reporting period, commercial and resource construction remain at high levels and materials prices have increased appreciably.

MEA expects 1981 deficit

By Our Financial Staff

MIDDLE EAST AIRLINES, the national flag carrier of Lebanon, expects to suffer losses of L£9m in 1981, according to Mr Salim Salaam, the company's managing director. Losses to date this year amount to about *L£75m.*

Mr Salaam said the airline's poor performance was attributable both to the world-wide recession, which has hit many carriers, and to the continuing civil strife in Lebanon.

Mr Salaam announced that MEA would go ahead with plans to begin services to New York and to the Far East at the end of the year, and to Brazil in the spring of 1982, using Boeing 747s.

He also confirmed that the airline's Board will decide at the end of next month whether to sign a $350m contract for five A310 Airbuses, which was delayed from last spring at MEA's request because of the crisis in Beirut.

The aircraft were originally ordered last year as part of MEA's determination to expand its network on medium as well as on longer routes—a policy which Mr Salaam suggested is still the management's strategy for recovery.

First-half gain at Svenska Fläkt

BY OUR STOCKHOLM CORRESPONDENT

SVENSKA FLÄKT, the Swedish industrial ventilation and air handling group, reports pre-tax earnings of SKr 10.1m ($1.9m) for the first six months of 1981 compared with a first-half loss of SKr 2.4m last year. Sales advanced by 25 per cent to slightly more than SKr 2bn.

As usual the group expects both sales incomes and profits to grow faster in the second half and is forecasting a pre-tax profit for the year as a whole of roughly the same as last year's SKr 153m, achieved on sales of SKr 4.3bn.

The order intake during the first half grew by 15 per cent over the corresponding period to SKr 2.7bn, of which 78 per cent came from outside Sweden. At the end of the period the group order book stood at SKr 5.2bn.

The company expects to improve this year on the 1980 operating profit of SKr 194m but the climb in pre-tax earnings, anticipated earlier, is likely to be thwarted by currency fluctuations, which reduced net financial income by some SKr 12m in the first half.

The rise in the value of the krona against other European currencies has also hampered exports, the interim report notes. Svenska Fläkt's new acquisition, the Babson Company of the U.S., has been included in the accounts from April 1.

Alcoa predicts lower earnings

BY JOHN WICKS IN ZURICH

PROFITS of Aluminium Company of America (Alcoa) are unlikely to be as good this year as in 1980 when net income was $469.9m, close to the previous year's record of $504.6m, the company said in Zurich yesterday.

In the first half of 1981 Alcoa's turnover had shown a slight increase from $2.59bn to $2.6bn, with higher sales prices offsetting a drop in shipments of aluminium products from 845,000 to 819,000 tonnes. Earnings dropped, however, from $292.3m to $182.6m as costs increased and a softening of markets prevented the company from recovering these overheads fully through higher prices.

At a meeting to mark the listing of Alcoa shares on Swiss bourses, as well as the stock exchanges of London and Frankfurt, the company forecast that sales volumes and profits would be down *again in the current* second half.

Mr W. H. Krome George, the chairman, said that the U.S. recession had proved "more stubborn than had been expected." A recovery initially expected in the second half of this year was now not likely until the first half of 1982 at the earliest.

However, he said the free market growth rate for primary aluminium was likely to average some 5.5 per cent between now and 1986, with operating rates for production facilities of around 93 per cent.

Alcoa, which this year expects to increase its capital spending from $833m to more than $700m, also announced the acquisition at a price of about DM 50m ($20m) of the alumina chemicals division of Giulini Chemie of Ludwigshafen. The purchase is the subject of a letter of intent recently signed with Isreali Chemicals Company.

FT UNIT TRUST INFORMATION SERVICE

OFFSHORE & OVERSEAS—contd.

Guinness Mahon Fd. Mgrs. (Guernsey)
PO Box 188, St. Peter Port, Guernsey. 0481 23506.
Intl. Fund .... $19.94 20.48 ..... 11.20.
Prices at Aug. 28. Next dealing Sept. 9.

Hambro Pacific Fund Mgmt. Ltd.

Management International Ltd.

Schroder Mngt. Services (Jersey) Ltd.

[illegible]

AUTHORISED UNIT TRUSTS

FT UNIT TRUST INFORMATION SERVICE

Lloyd's Life Unit Tst. Mngrs. Ltd.
2, St. Mary Axe, EC3A 8BP. 01-623 6114

Equity Accum. (2)	278.1	292.8	.....	3.71

Local Authorities' Mutual Invest. Tst.*
77, London Wall, EC2N 1DB. 01-588 1815

Property Fd. July 31		150.80	.....	6.97
Wider Fund July 31		289.05	.....	4.74
Narrower Fd. July 31		72.70	.....	14.02

*Unauthorised. Available only to Local Authorities.

M & G Group (y)(c)(z)
Three Quays, Tower Hill, EC3R 6BQ. 01-626 4588

American	72.9	78.0xd	-1.1	2.32
(Accum. Units)	[illegible]	[illegible]	-1.2	2.32
American Recovery	[illegible]	[illegible]	-1.2	1.55
(Accum. Units)	[illegible]	[illegible]	-1.3	1.55
Australasian	102.0	109.1xd	-1.0	1.26
(Accum. Units)	107.1	114.6	-1.1	1.26
Commodity	136.1	145.6xd	.....	3.20
(Accum. Units)	161.7	173.0	+0.1	3.20
Compound Growth	[illegible]	214.3	+0.2	[illegible]
Conversion Growth	127.6	136.5	-1.0	2.35
Conversion Income	77.9	[illegible]	+0.3	8.49
Dividend	133.9	[illegible]	+0.8	9.27
(Accum. Units)	[illegible]	[illegible]	+1.8	9.27
European	[illegible]	67.1	+0.3	[illegible]
(Accum. Units)	[illegible]	74.7	+0.4	[illegible]
Extra Yield	[illegible]	[illegible]	+0.4	[illegible]
(Accum. Units)	141.7	154.9	+0.5	[illegible]
Far Eastern	118.9	128.4xd	-3.3	1.44
(Accum. Units)	136.9	147.8	-3.6	1.44
Fund of Inv. Tsts.	102.8	110.5	+0.4	4.27
(Accum. Units)	140.4	150.9	+0.6	4.27
General	[illegible]	[illegible]	+0.9	5.76
(Accum. Units)	[illegible]	[illegible]	+1.6	5.76
Gilt Income	[illegible]	45.2xd	-0.1	10.61
(Accum. Units)	[illegible]	[illegible]	-0.1	10.61
High Income	114.3	[illegible]	+0.3	8.62
(Accum. Units)	[illegible]	[illegible]	+0.4	8.62
Japan	[illegible]	213.2	-2.7	0.61

[illegible]

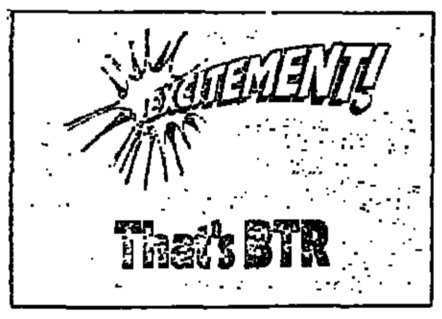
INSURANCE PROPERTY BONDS

[illegible]

OFFSHORE & OVERSEAS FUNDS

[illegible]

Continued on previous page



FT SHARE INFORMATION SERVICE

BRITISH FUNDS

"Shorts" (Lives up to Five Years)

[illegible]

Five to Fifteen Years

[illegible]

Over Fifteen Years

[illegible]

Undated

[illegible]

INT. BANK AND O'SEAS GOVT. STERLING ISSUES

[illegible]

CORPORATION LOANS

[illegible]

COMMONWEALTH AND AFRICAN LOANS

[illegible]

LOANS

Public Board and Ind.

[illegible]

Financial

[illegible]

FOREIGN BONDS & RAILS

[illegible]

AMERICANS

[illegible]

CANADIANS

[illegible]

BANKS AND HIRE PURCHASE

[illegible]

Hire Purchase, etc.

[illegible]

BEERS, WINES AND SPIRITS

[illegible]

BUILDING INDUSTRY, TIMBER AND ROADS

[illegible]

CHEMICALS, PLASTICS

[illegible]

CHEMICALS, PLASTICS—Cont.

[illegible]

DRAPERY AND STORES

[illegible]

ELECTRICALS

[illegible]

ENGINEERING MACHINE TOOLS

[illegible]

FOOD, GROCERIES, ETC.

[illegible]

FOOD, GROCERIES—Cont.

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS—Continued

[illegible]

CATERERS

[illegible]

INSURANCE

[illegible]

INSURANCE—Continued

[illegible]

LEISURE

[illegible]

MOTORS, AIRCRAFT TRADES

Motors and Cycles

[illegible]

Commercial Vehicles

[illegible]

Components

[illegible]

Garages and Distributors

[illegible]

NEWSPAPERS, PUBLISHERS

[illegible]

PAPERS, PRINTING ADVERTISING

[illegible]

PROPERTY

[illegible]

PROPERTY—Continued

[illegible]

SHIPPING

[illegible]

SHOES AND LEATHER

[illegible]

SOUTH AFRICANS

[illegible]

TEXTILES

[illegible]

TOBACCOS

[illegible]

TRUSTS, FINANCE, LAND

Investment Trusts

[illegible]

INVESTMENT TRUSTS—Cont.

[illegible]

Finance, Land, etc.

[illegible]

OIL AND GAS

[illegible]

OIL AND GAS—Continued

[illegible]

OVERSEAS TRADERS

[illegible]

RUBBERS AND SISALS

[illegible]

TEAS

India and Bangladesh

[illegible]

Sri Lanka

[illegible]

Africa

[illegible]

MINES

Central Rand

[illegible]

Eastern Rand

[illegible]

Far West Rand

[illegible]

O.F.S.

[illegible]

Finance

[illegible]

Diamond and Platinum

[illegible]

Central African

[illegible]

MINES—Continued

Australian

[illegible]

Tins

[illegible]

Copper

[illegible]

Miscellaneous

[illegible]

NOTES

Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 30 per cent and allow for value of declared distribution and rights.

- ● "Tap" Stock.
- * Highs and Lows marked thus have been adjusted to allow for rights issues for cash.
- † Interim since increased or resumed.
- ‡ Interim since reduced, passed or deferred.
- ‡‡ Tax-free to non-residents on application.
- ♦ Figures or report awaited.
- ♦ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- †† Dealt in under Rule 163(2)(a); not listed on any Stock Exchange and not subject to any listing requirements.
- ‡‡ Dealt in under Rule 163(3).
- # Price at time of suspension.
- ¶ Indicated dividend after pending scrip and/or rights issue: cover relates to previous dividend or forecast.
- ♦ Merger bid or reorganisation in progress.
- ♦ Not comparable.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ★ Cover does not allow for shares which may also rank for dividend at a future date. No P/E ratio usually provided.
- ‖ No par value.

♦♦ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. ‡‡ Available only to UK pension schemes and insurance companies engaged in pension business. a Tax free. b Figures based on prospectus or other official estimate. c Cents. d Dividend rate paid or payable on part of capital; cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending. q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast dividend: cover based on previous year's earnings. v Tax free up to 30p in the £. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1981-82. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1982. K Figures based on prospectus or other official estimates for 1981-82. M Dividend and yield based on prospectus or other official estimates for 1980. N Dividend and yield based on prospectus or other official estimates for 1981. P Figures based on prospectus or other official estimates for 1982. Q Gross. T Figures assumed. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL MARKETS

The following is a selection of London quotations of shares previously listed only in regional markets. Prices of Irish issues, most of which are not officially listed in London, are as quoted on the Irish exchange.

Albany Inv. 20p	46	......
Bertrams	18	......
Bdg'wtr. Est. 50p	465	......
Craig & Rose £1	£13	......
Finlay Pkg. 5p	22	......
Graig Ship. £1	£25	......
Higsons Brew	70	+2
Holt (Jos) 25p	500	......
I.O.M. Stm. £1	170	+5
Pearce (C. H.)	860	......
Peel Hldgs.	100	......
Sheff. Refrshmt	85	......
Sindall (Wm.)	194	......

IRISH

Conv. 9% '80/82	£92	......
Nat. 9¾% 84/89	[illegible]	......
Fin. 13% 97/02	[illegible]	......
Alliance Gas	67	......
Arnott	225	......
Carroll (P.J.)	81	......
Concrete Prods.	91	......
Heiton (Hldgs.)	29	......
Irish Ropes	44	......
Jacob	64	......
T.M.G.	18	+2
Unidare	75	......

OPTIONS

3-month Call Rates

Industrials

A. Brew	6½
BOC Intl.	11
B.S.R.	7
Babcock	22
Barclays Bank	36
Beecham	18
Blue Circle	35
Boots	20
Bowaters	24
Brit. Aerospace	17
B.A.T.	25
Brown (J.)	9
Burton Ord.	14
Cadburys	7½
Courtaulds	7
Debenhams	10
Distillers	17
Dunlop	8½
Eagle Star	25
F.N.F.C.	3
Gen. Accident	30
Gen. Electric	60
Glaxo	26
Grand Met.	18
G.U.S. 'A'	44
Guardian	30
G.K.N.	15
Hawker Sidd	25
House of Fraser	14
I.C.I.	28
"Imps"	7
I.C.L.	6
Ladbroke	30
Legal & Gen.	20
Lex Service	10
Lloyds Bank	28
"Lofs"	4½
London Brick	7
Lucas Inds.	18
"Mams"	28
Mrks. & Spncr	11
Midland Bank	26
N.E.I.	8
Nat. West. Bank	32
P & O Dfd.	12
Plessey	28
Racal Elect.	36
R.H.M.	5
Rank Org. Ord.	18
Reed Intnl.	25
Sears	5
Tesco	5½
Thorn EMI	30
Trust Houses	15
Tube Invest.	18
Turner & Newall	10
Unilever	50
Utd. Drapery	6½
Vickers	16
Woolworths	6

Property

Brit. Land	8
Cap. Counties	11
Land Secs.	37
MEPC	28
Peachey	15
Samuel Props.	13
Town & City	2¾

Oils

Brit. Petroleum	38
Burmah Oil	16
Charterhall	8
KCA	22
Premier	7½
Shell	38
Tricentrol	30
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Mines

Charter Cons.	21
Cons. Gold	45
Lonrho	9
Rio T. Zinc	45

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FINANCIAL TIMES
Tuesday September 1 1981

WEST GERMAN DEFENCE SPENDING MAY BE HIT AGAIN

Bonn plans budget cuts

BY JONATHAN CARR IN BONN

FURTHER CUTS may be imposed on projected West German Government spending next year beyond those planned just a month ago, with defence spending again one of the casualties.

This emerges from draft proposals released here in advance of a Cabinet session tomorrow and on Thursday at which the final budget sum is to be approved.

According to the draft, the budget total and the sum allocated to defence will each rise by just under 4 per cent next year, instead of the 4.2 per cent so far planned.

As a result total budget expenditure will be DM 240.1bn (£53bn), some DM 700m less than the sum agreed in principle *in Government discussions on* July 30, and defence spending will be DM 43.7bn, close to DM 100m less than expected.

The cuts are not huge in themselves, and there is still scope for changes before the Cabinet gives final assent and the budgetary battle in Parliament begins.

The U.S. has already criticised the previously planned defence spending increase of 4.2 per cent as insufficient, given the pledge by Nato countries to try to achieve a goal of a 3 per cent rise in real terms.

But it is considered politically impossible in Bonn for the Government to permit defence spending to rise faster than the increase *in the budget as a* whole.

Relations between the Social Democrat and Liberal Free Democrat coalition partners have already been soured by tough and sometimes emotional budget savings discussions which have dragged on throughout the summer recess.

The Free Democrats are still pressing for cuts to be made in social security payments—*for* example, in unemployment and sickness benefits. The Social Democrats deplore any such move. Yet some compromise has to be found before the Cabinet meets tomorrow.

Thus, a special boost to the defence budget would be almost bound to bring a revolt among the Social Democrats and make parliamentary approval of the whole package even *more uncertain*.

The main aim of the savings exercise it to limit the Government's net borrowing next year to DM 26.5bn (against DM 35bn this year). It is felt this would take pressure off the capital market, help produce a fall in interest rates and encourage an economic upswing.

On July 30, the Cabinet agreed on DM 14.4bn in expenditure cuts and tax increases for 1982, *and resolved to approve* a final package of about DM 18bn in early September.

The remaining sum is proving very hard to produce — partly because the Social Democrats, supported by the Trades Unions, wants the savings to be accompanied by a State investment programme to create more jobs. The Free Democrats however, are opposed to the idea.

The delay of a month between *the two Cabinet sessions has not* only given full scope for bickering between the two parties. It has also allowed time for virtually every organisation and pressure group affected by the budget savings to say why it believes the Government's plans are unfair and will fail.

BP pays record tax bill for N. Sea oil

By Martin Dickson and Peter Riddell

BRITISH PETROLEUM will this week, probably today, write out the largest-ever cheque for a tax bill, about £900m, on its North Sea oil interests. This is equivalent to 1p off the basic rate of income tax for everyone.

A total of about £2bn of petroleum revenue tax and the new supplementary petroleum duty is expected to be paid to the Government in the next *week or two. About £1½bn will* be paid today or tomorrow.

The exact scale is uncertain because of the method of assessment but about half the projected yield of £4.1bn on the two taxes for the whole of the *1981-82* financial year is due in early September.

Tax payments of this size in a very short period will drain a very large amount of liquidity *out of the London money* markets which might, unless action is taken, put upward pressure on short-term interest rates.

Anticipating this problem the Bank of England has issued about £1bn of bills which mature today, injecting cash *into the system to offset these* pressures. Together with other assistance to the markets the Bank should be able to prevent any undue problems.

By far the biggest single contributor to the total tax payment will be British Petroleum, which will be paying about £900m due mainly on its Forties field.

Others facing large tax bills will be members of the consortium which has developed the Piper and Claymore fields. Occidental, which is operator for the two fields and has a 36 per cent stake in each of them, will be paying the Inland Revenue about £190m. Of this, about £60m is believed due to the supplementary duty and £130m to the petroleum revenue tax. Other partners in the consortium are Allied Chemical, Getty and International Thomson.

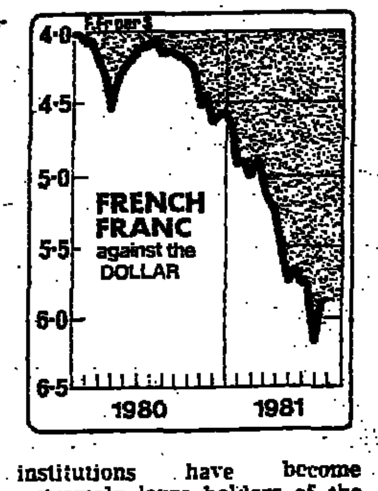
The Ninian field, the second *most* productive in the UK sector, does not come due for petroleum revenue tax payments until next year but will, in common with other fields, face supplementary duty at 20 per cent of the gross value of production. For Chevron, the field operator, with a 16 per cent stake, this is likely to mean a payment today of about £20m to £30m.

Substantial supplementary duty contributions will also come from Shell and Esso, joint developers of the Auk, Brent, Cormorant and Dunlin fields.

The state-owned British National Oil Corporation's various interests mean its supplementary duty payments are likely to total £40m to £60m, according to industry estimates.

THE LEX COLUMN

One for the rentier



France's new Socialist Government is about to make its stock market debut, not with nationalisation offers — although they will come soon enough — but with its first *state* bond. It is paying for the privilege with a 16¾ per cent coupon on the six-year issue to raise FFr 8bn, or possibly a somewhat larger amount if demand is good.

The relatively small size of the issue *suggests that the* Government is testing the water with a frightened investment community, and there are other conciliatory features. The fact that the budget deficit is being funded in part by the demonetising of savings, rather than by borrowing from the banks through an enlarged Treasury bill issue, shows that sound money policies have not been entirely *abandoned*. And the short life of the bond suggests that the authorities are not cynical enough about continuing *rapid inflation* to lock themselves into very high coupon long-dated borrowing.

If the bulk of this year's *central government budget* deficit really is to be covered by bond issues, there will have to be more in the autumn. The deficit seems to be heading for FFr 70bn or so, and the only state bond so far this year was a FFr 10bn issue in the New Year. Since then the bond market has sat through four rounds of elections, presidential and parliamentary, a serious run on the franc, and a sharp rise in U.S. interest rates, so that yields have risen by roughly three points. A large increase in the supply of paper is now threatened, not only from the Government itself, but from state bodies with large *borrowing* requirements which have been unable to fund themselves adequately during the confusion of the summer.

Crédit National and Electricité de France have recently come to the market for FFr 6bn —although state-guaranteed, their bonds do not carry the same tax privileges for personal sector holders as the Government's own paper does and yields are roughly half a point *higher*. Banque Nationale de Paris, which is nationalised but does not enjoy an explicit state guarantee for its bonds, is having to pay 17.7 per cent for eight-year money and a true private sector borrower would be facing a borrowing cost in excess of 18 per cent.

Perhaps curiously, the Government has made no attempt to get the coupon on its bond down by offering some sort of indexation. Gold-linking is right out of fashion, having been denounced by M Mitterand as a bad deal for the borrower (state institutions have become extremely large holders of the two gold-backed issues, which will greatly reduce the net cost of redeeming them). But an *issue with interest payments* linked to the European Unit of Account, such as was floated in 1977, had been widely rumoured; the 1977 bond, despite its low coupon—8.8 per cent—trades very near par, admittedly in the middle of a devaluation scare. Maybe it was the risk of a devaluation during the placing of the new state bond that ruled out the option of foreign currency linking.

With French inflation accelerating, the budget deficit widening and the currency in danger there is little chance of foreign enthusiasm for French franc state sector paper, even on a 17¾ per cent yield. But once the franc has been devalued, a fall in dollar interest rates would allow lower rates in Paris and these high coupon issues could be attractive; they will be much more volatile than German bonds.

The great barrier to foreign interest is the markets' general lack of depth. However, if large Government bonds are to become more frequent, it will no longer be possible *to rely on* selling them to the personal sector with the help of tax concessions. The institutional market will have to develop more maturity; the Bourse may even find itself with a proper bond market to compensate it for the nationalisation of the major quoted companies.

Japan

Tokyo's *Dow Average* has fallen 3.7 per cent since the peak of over 8,000 reached a fortnight ago and the latest Ministry of Finance figures show net purchases by foreigners of Japanese equities dropping back from $425m in June to $111m last month. But this news hardly seems to have penetrated the euromarket, Japanese companies are still managing to raise plenty of money through convertible bonds.

Last week's crop of Japanese convertibles in the dollar sector of the market totalled $350m, or three-quarters of all eurodollar offerings, and demand was heavy enough to enable the coupon on two earlier issues to be cut.

For the borrower, the Eurodollar *market represents* a surprisingly cheap source of funds. A 5 per cent coupon on dollar convertibles *is* now *standard*, lower than on Swiss francs where a premium yield has to be offered because of the highly limited secondary market. The long-term prime rate in Japan is now 8.5 per cent and in the domestic bond market priority is given to the *government, utilities and heavy industrials. Since Japanese* investors are also awkward enough to like security on debt *offerings* a retailer, *for example*, might find the Euromarket more welcoming, as well as cheaper.

The dollar vehicle is in any case attractive as a currency hedge for the borrower. Roughly 97 per cent of Japanese imports are invoiced in foreign currency — mostly dollars.

But the investor's appetite *can only be sustained as long* as the prospects for the Tokyo stock market and the yen look good. Recent conversion premiums may be low—at around 5 per cent recently, compared with a typical 10 per cent or more on U.S. corporate convertibles—but so is the income premium on the dollar-denominated bonds, and if the yen weakens an investor will prefer to buy the equity outright. If *the share price is falling too*, the allure evaporates altogether. Cities Service, a U.S. oil group, was offering a record-equalling 17 per cent on straight Eurodollar debt last week.

With the yen languishing around 230 to the dollar and the stock market well off its peak, the Euromarket investment community is beginning to get cold feet. There was heavy net selling in the secondary market last week, with prices being supported by stock accumulation at the dealing houses.

The high quality of the borrowers has so far helped to sustain the market. But that too is changing. The Japanese Ministry of Finance relaxed its guidelines on foreign currency borrowing by Japanese companies late last year and there are now estimated to be 30 or 40 potential borrowers circling London in a holding pattern, not all of them established names.

Angola says towns still occupied by S. Africans

By Our Foreign Staff

ANGOLA said yesterday that South African forces were still occupying several towns in the south of the country. Fighting between Angolan troops and the South Africans was continuing, Luanda said, despite an *announcement that Pretoria was* withdrawing.

The official Angolan news agency Angop, said the South Africans, who entered the country last week from bases in Namibia, still held the towns of N'giva and Xangongo, along with other areas of Angola's Kunene province.

Luanda gave not details of the fighting but said South African aircraft had attacked a military column on Sunday near Chibemba, about 150 miles inside Angola.

The town of Cahama, south of Chibemba, was the target of South African air attacks last week. Britain's Ambassador to Luanda, on a visit to parts of last week's battle areas, said Cahama had been completely destroyed.

South Africa insisted that its forces were continuing their withdrawal and were not engaged in fighting with Angolan troops. Pretoria has said its troops had completed their mission inside Angola, which was to destroy bases of the South West Africa People's Organisation (Swapo).

Swapo has been fighting a guerrilla war for more than 14 years to end South African control in Namibia.

In New York the UN Security *Council delayed talks* on the South African incursion yesterday.

Reginald Dale adds from Washington: The U.S. Administration has made it clear it does not plan to "take sides" in southern Africa—either in disputes between South Africa and its neighbours or in internal South African conflicts between blacks and whites.

The new policy was comprehensively expounded at the week-end by Mr Chester Crocker, Assistant Secretary of State for African Affairs, in a spech in Honolulu.

Coffee producers seeking united front for key talks

BY JOHN EDWARDS, COMMODITIES EDITOR

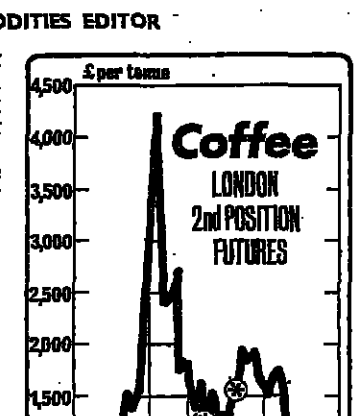
LEADING COFFEE producing countries today start crucial talks in London aimed at raising world prices and restoring stability to the market. Representatives from coffee exporting countries are to try to form a united front before full-scale talks with representatives of consumer countries *begin on September 7*.

The International Coffee Agreement, between exporting and importing countries, seeks to control the world coffee market. If world prices fall below an agreed level, quotas are cut; if prices rise above a set point, the quotas are increased.

Considerable difficulty is expected in agreeing both price and quota levels for the forthcoming coffee year, from October 1981 to September 1982.

World coffee prices are well below the agreement's minimum level of 115 cents a lb in spite of extensive quota cuts and the frost in Brazil during July that virtually halved next season's crop.

Prices shot up when the frost struck but they are now virtually back to the pre-frost level of below 110 cents a lb. In London prices have been inflated by the decline in the value of sterling.



But the futures market has fallen to below £900 a tonne compared with a peak of £1,170 in late July. In early July, before the frost, futures hit a 5½-year low of £735.

South American producers agreed last week to press for a minimum price of 135 cents. But they are likely to meet stiff opposition from consumers, led by the U.S., who will argue that the world surplus means there is no justification.

For the season, just ending, export quotas were originally set at a global total of 58.2m bags (of 60 kilos each). Trigger price levels were agreed at a low of 120 cents and a high of *150 cents, with the objective of* defending a floor level of 115 cents and a ceiling of 155 cents.

In the event prices fell below 100 cents a lb at one stage, in spite of quotas being cut by a total of 7m bags to 51.2m.

Brazil accepted a modest original quota of 14.5m bags because of a shortage of supplies, but has just harvested a bumper crop of 32m, which was not affected by the July frost. *It is, therefore, expected to* press for an increase in its quota to at least 17m bags.

Pressure from Brazil for a much larger quota will be tempered by the knowledge that its 1981/82 crop, to be harvested next summer, is likely to be cut by at least 12m bags to around 15m—even the normally sceptical U.S. Department of Agriculture agreed in a survey that the frost damage meant an *anticipated reduction of over 45* per cent.

Exotically-dressed dancers parading through the streets of Notting Hill, London, as the Bank Holiday weekend carnival reached its climax yesterday afternoon. Despite the sunny weather, crowds were thinner than in previous years, and by early yesterday evening police had reported only ten arrests, mostly for minor offences.

Continued from Page One

Exports

is still high by historic standards.

Reports from the CBI's regional offices indicate a slight recovery in export demand. This is usually associated with dollar-related markets or products following the fall in the value of the pound against the U.S. currency.

Overseas competition in European markets is reported to remain as difficult as previously, reflecting the continued strength of sterling against the Continental currencies.

Apart from the fall in the pound against the dollar, export demand may have been boosted by a slight pick-up in world trade.

Overall, the inquiry points to little or no change in manufacturing output during the rest of this year. Of the 1,786 replies to the questionnaire some 17 per cent expect a rise in the volume of output over the next four months, 15 per cent a drop, and the rest no change. The chemicals and the metal manufacturing sectors are the most optimistic.

There has been a slight recovery in total order books *relative to normal levels*. This is possibly due to changing views of what is normal as well as to a strengthening in order books.

The volume of stocks of finished goods is continuing to become less excessive, following the record rundown of the last year. The balance reporting more than adequate stocks is the lowest for 18 months.

The proportion of companies expecting to raise their selling prices during the next four months has picked up during the summer, though only by comparison with the very low levels of last winter when stocks were being cut. Price expecta*tions are still moderate and the* rate of growth of wholesale output prices is likely to remain around recent levels.

Included in the survey are new forecasts by the CBI staff economists. These show little more growth than previously projected because of the fall in sterling. Nevertheless, real Gross Domestic Product is expected to rise only slightly next year—up 0.3 per cent after a 3.2 per cent drop this year.

The main upward influences are likely to be the end of destocking, some growth in exports and a slight increase in consumer spending.

Continued from Page One

Iran

with death sentences.

Despite this however it was clear that the mood of the mourners was different from what it had been at Iran's last major funeral, that of Ayatollah Beheshti, and over 70 victims of a bomb explosion which shattered the headquarters of the ruling Islamic Revolutionary Party in late June.

Many in the crowd seemed despondent as they returned home from yesterday's ceremonies and some gave voice to puzzlement as to how it was that such a bomb could have been placed after two months of extensive anti-terrorist activity.

The reaction to the deaths appears to have raised questions about the future of the country's security services. Asked how he thought it had been possible to bomb the room where Iran's National Security Council was meeting, one cleric said that "mercenary elements have penetrated everywhere, even into the revolutionary institutions." The funeral crowds echoed this sentiment, calling for fresh purges in the security services.

In the short term, however, Iran's leaders will not be able to deny that this double assassination was a major coup.

The death of 48-year-old President Rajai, who was elected to replace the fugitive President Bani-Sadr less than a month ago, and of 47-year-old Hojatolislam Bahonar, means that Iran faces a new round of presidential elections within the next 50 days.

Continued from Page One

Prime rate cut

Chase itself warned yesterday that its prime cut was "not necessarily a prediction of the future direction of (interest) rates. Rather it is a reflection of current market conditions."

Chase Manhattan's move helped buoy the New York Stock Exchange, which has suffered its severest slump in the past 12 months. The Dow Jones industrial index, which hit a 13-month low last week, gained *nearly four points in early trad*ing, after Chase announced its prime rate cut.

The stock market, however, gave up much of its initial advance later in the session as the initial optimism over the prime cut wore off in the face of a firming in the rate of federal funds.

These overnight interbank funds hit a surprising low level of 14 per cent late on Friday but were settling around the 16¾ and 17 per cent level yesterday. The stock market's retreat also reflects the underlying concern of Wall Street over the long-term outlook on interest rates and the economy.

In the New York foreign exchange market, the U.S. dollar strengthened in the morning from the depressed levels in Europe earlier in the day.

Weather

UK TODAY

CLOUDY, some wind and showers, but warm.

London, S., SE., N.W., and N. England, Midlands, Channel Islands, Lake District

Cloudy, some wind, sunny intervals, but drizzle. Max. 20 C.

E. Anglia, E. and N.E. England

Cloudy, cool, some drizzle and winds. Max 17 C

Wales, S.W. England, Isle of Man, S.W. Scotland, Argyll, N. Ireland

Dry, cloudy with winds and sunny intervals. Max. 21 C.

Borders, Glasgow, Highlands, N.W. Scotland

Warm, but some wind and drizzle. Max: 19 C

Edinburgh, Dundee, Aberdeen, Moray Firth, N.E. Scotland, Orkney, Shetland

Cloudy, some wind and sunny intervals. Max. 15 C

Outlook: Mainly dry, with cloud and sunny intervals.

		Y'day midday °C	°F			Y'day midday °C	°F
Ajaccio	F	26	79	Locarno	F	24	75
Algiers	F	30	86	London	F	18	64
Amsdm.	C	17	63	L. Ang.†	C	20	68
Athens	S	27	81	Luxmbg.	S	19	66
Barclna.	F	28	82	Luxor	S	38	100
Beirut	S	29	84	Madrid	S	25	77
Belfast	S	16	61	Majorca	S	27	81
Belgrd.	S	25	77	Malaga	S	25	77
Berlin	C	17	63	Malta	S	28	82
Biarritz	C	22	72	M'chestr	F	18	64
Bmghm.	F	17	63	Melbne.	F	15	59
Blackpl.	F	18	64	Miami†	C	26	79
Bordx.	C	25	77	Milan	F	25	77
Boulgn.	F	20	68	Montrl.†	C	20	68
Bristol	C	17	63	Moscow	C	12	54
Brussels	F	18	64	Munich	S	22	72
Budpst.	C	19	66	Nairobi	S	14	57
Cairo	S	32	90	Naples	S	26	79
Cardiff	F	19	66	Nwcstl.	C	14	57
Cas'bca	S	23	73	N York†	C	21	70
Cape T.	F	14	57	Nice	S	25	77
Chicg.†	R	21	70	Nicosia	S	29	84
Cologne	F	19	66	Oporto	S	21	70
Conhgn.	F	17	63	Oslo	C	18	64
Corfu	S	28	82	Paris	F	22	72
Denver†	C	18	64	Perth	S	18	64
Dublin	F	17	63	Prague	S	19	66
Dbrvnk.	S	24	75	Rykjvk.	R	12	54
Ednbgh.	C	12	54	Rhodes	S	29	84
Faro	F	25	77	Rio J'o†	F	27	81
Florence	S	29	84	Salzbrg.	S	22	72
Frankft.	F	20	68	S'cisco†	F	11	52
Funchal	F	22	72	Stckhm.	C	10	50
Geneva	F	26	79	Strasbg.	S	21	70
Gibrltr.	S	25	77	Sydney	R	9	48
Gl'sg'w	C	14	57	Tangier	S	23	73
G'rnsey	C	18	64	Tel Aviv	S	29	84
Helsinki	R	12	54	Tenerife	S	25	77
H. Kong	F	30	86	Tokyo	S	32	90
Innsbrk.	F	23	73	T'r'nto†	C	20	68
Invrnss.	F	14	57	Tunis	S	32	90
I. o. Man	S	16	61	Valencia	S	27	81
Istanbul	S	25	77	Venice	F	25	77
Jersey	C	21	70	Vienna	S	20	68
L. Plms.	S	24	75	Warsaw	C	18	64
Lisbon	F	23	73	Zurich	C	23	73

C—Cloudy. F—Fair. Fg—Fog. H—Hail. R—Rain. S—Sunny. Sl—Sleet. Sn—Snow. T—Thunder.
† Noon GMT temperatures.

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